Clinical Lecture
ON
BIRTH PALSIES.

Delivered at University College Hospital, June 15th, 1886,

BY W. R. GOWERS, M.D., F.R.S.

(*Concluded from page 711.*)

HAVING considered the general history of these cases of cerebral birth palsy, let us now examine a little more closely the case before us. No special difficulty in his birth is known, but he conforms to the common rule in being the first-born of the family. Nothing attracted the attention of his mother during early infancy; but at twelve months old it was found that efforts to get him to stand and walk were without effect, and then it was noticed how frequently his legs became unnaturally stiff, and that his hands were awkward. As time went on, these symptoms seemed to increase, and his general backwardness, compared with other children, forced upon his parents the suspicion of some mental defect. Even now, although eight years old, he cannot read, and he cannot even repeat the alphabet correctly. He seems to understand what is said to him, but he remembers little, and his power of attention is manifestly weak. As you see, the left eye deviates inwards, and if we test the movements we find that the deviation is due to spasm, not to paralysis of the external rectus. His arms are fairly strong, but they are habitually semiflexed and slightly rigid at the elbow, and the fingers are in constant slight slow movement. If he tries to grasp an object he can do so, but the fingers are first over-extended and then close upon the object slowly and irregularly. His legs are affected in much greater degree than the arms. They are rigid and flexed at both hip and knee joints, and strongly adducted. The rigidity varies from time to time, and now and then the knees become extended. A slap on one leg, for instance, brings on extensor spasm. He has a little power of flexing and extending the knee and hip joints, but no power of flexing or extending the ankles. The feet point downwards, from the persistent spasm in the calf muscles; but if I gently press on the sole, you see that the contraction gradually yields, so that at last the ankle is fully flexed. But the flexion cannot be maintained; when the pressure ceases, the foot reverts to its original position. The knee jerk is excessive, and a foot clonus can be obtained—more readily on the left side than on the right. If he tries to stand, the rigidity increases, and the spasm in the adductors carries one foot in front of the other, so that the legs are crossed, while the extension of the feet renders it impossible for him to get the soles on the ground.

I may describe to you two or three other cases in further illustration of the facts I have mentioned—cases that are typical of a much larger number that have come under my notice. The first shall be a case of unnatural presentation. A boy aged five was brought to me with this history. He was the eighth child; the previous confinements had been easy, but this was a breech presentation, and the child was born apparently dead. When, after long efforts, he was made to breathe, convulsions came on, and continued daily for a month; they then ceased, and have not recurred. The boy had an idiotic aspect, with open mouth and dribbling of saliva. He had never spoken, but uttered a guttural sound occasionally, which his parents tried to interpret as a word. It seemed probable that he understood something of what was said to him. There was, and had always been, considerable difficulty in swallowing. He had great difficulty in supporting his head; indeed, he could not support it, but it fell first to one side and then to the other. His back was also weak, the spine arched forward, and a little sideways. His hands were in constant irregular movement; the thumb often bent in; the fingers now flexed, now irregularly extended. The wrists were bent, now forwards, now backwards; the elbows were alternately flexed at a right angle and over-extended to such a degree that the forearm formed an angle with the upper arm. The left arm moved less than the other, and if he tried to grasp an object it was always with this hand. The legs were usually rigid and strongly pressed together; the knees were flexed; the feet extended and inverted; the toes separated and in constant movement. He could not be induced to try to stand. If held up, only the toes touched the ground, on account of the contraction of the calf muscles, although this contraction could be altogether overcome by gentle force. Six months later the only change was that he had gained some power of supporting the head.

Another case was that of a girl, aged six at the time I saw her. She was the third child, but her birth had not therefore been an easy one. The mother's pelvis was so narrow that each of the previous two children died during the labour. This child was born without instrumental aid, but seemed also to be dead, and only showed signs of life at the end of three quarters of an hour. Nothing wrong was noticed during the first weeks of life, when the fact that her arms were scarcely moved attracted attention. As the months passed she moved them more, but it was seen that the movements were unsteady, and she never attempted to grasp. When the time came at which a child ought to stand, she could not be induced to make any attempt to do so. At two years old spontaneous movements came on in the arms, and a year or two later in the legs also. The aspect of the child, when she came under my notice, was very striking, and, except for the persistent spasm, closely resembled that of severe chorea. Sudden, varying contractions were going on in almost all the muscles of the body—arms, legs, trunk, and neck. The legs, for instance, were never completely at rest; slight contractions, sufficient to jerk the limb a little, were constant. The joints were all extended, the feet strongly so, and were slightly inverted, the toes pointing downwards as she sat. Voluntary movement was very irregular and jerky, and she was quite unable to stand alone. In the arms the spontaneous movements were wider in range and more irregular in character than in the legs. The wrists, as a rule, were strongly flexed, but now and then were involuntarily extended. The fingers also were in general flexed, but in constant irregular movement, and at times would become extended. If an object was then placed in the hand the fingers closed over it, and she had some power of modifying the grasp, either by intensifying or diminishing it, but not enough power of relaxation to let go the object. She could extend the proximal phalanges of the fingers, but had very little power over the middle or distal phalanges. She could move the elbow and shoulder joints fairly well, but the movements were wildly irregular, and on an attempt to exert force the arm would fly about from side to side. The disorder was considerably greater in the right arm than in the left. Her limbs were well nourished, and the electrical excitability of the muscles was normal. The muscles of the trunk were also feeble, so that she sat bent forwards "all of a heap," as her mother said. There was slight spontaneous movement in the muscles of the face, and on an attempt to speak the mouth was often moved from side to side for a few seconds before she could begin. Her mental state seemed to be nearly normal.

The Diagnosis of this malady seldom presents much difficulty. If the character of the symptoms and their cause are known, the affection is readily recognised. The most important distinctions from other cerebral diseases are that there is no history of a definite onset at any time after birth, and that the condition is not progressive. Bilateral weakness with spasm may result from a tumour of the pons, but the two criteria just mentioned will always suffice for the distinction of this disease from birth palsy. If the injury to the brain is chiefly one-sided, the resulting symptoms may resemble those of the "acquired" hemiplegia that occasionally results from a sudden lesion during infancy. But such a lesion has been attended with acute symptoms at the time of the onset, and of these there generally is a clear history. Moreover, birth palsy is scarcely ever strictly unilateral; one side may be much more affected than the other; but if you examine the limbs that seem to be normal, you will find that they present slight disturbance of the same kind as that which is so marked on the other side. A greater difficulty is presented by the cases in which the legs suffer much more than the arms, and in which the spastic paralysis of the legs resembles very closely that which is produced by disease of the spinal cord. Here also, however, you will find traces of the disorder in the parts that appear at first sight to be free. The

movements of the hands are distinctly awkward, and differ from those of a healthy child, although the parents often have not recognised the abnormality. Even without this, you will be justified in suspecting that the case is one of birth palsy if there is no history of a definite onset—if the child, for instance, has never been able to walk. Remember that chronic disease of the spinal cord is almost unknown in early childhood. Most cases of paraplegia of chronic onset in children are due to caries of the spine, and I do not remember to have seen, in a young child, a single instance of primary chronic lesion of the cord itself, such as so often causes, in the adult, a condition of the legs similar to that seen in these cases of "congenital paraplegia."

When the weakness of the legs is slight, so that the child is able to walk, but in an awkward manner, the condition is occasionally mistaken for pseudo-hypertrophic paralysis. The error is rendered easier by the facts that the muscles are often large and firm, that there is some contracture of the calf muscles, and that the child learned to walk later than children commonly do. Thus the superficial resemblance between the two diseases is extensive; but so likewise is their difference. The contracture in the calf muscles can be overcome in the birth palsy, for it depends, as we have seen, on active muscular contraction. In the pseudo-hypertrophic disease it is a fixed structural shortening which cannot be overcome. Moreover, there is no trace of the characteristic condition of the muscles about the shoulder almost invariable in pseudo-hypertrophic paralysis—the large infra-spinatus and the defective pectoralis and latissimus dorsi; nor is there the equally common lordosis. Lastly, there is one test which alone decides the question—the state of reflex action in the legs. In birth palsy the knee jerk is excessive, and a cutaneous stimulus excites reflex spasm. In the muscular disease the knee jerk is never increased; it may be normal, but it is often diminished or lost, and you cannot, by any peripheral impression, produce the extensor spasm so characteristic of birth palsy.

The Prognosis in these cases is always anxiously asked for by the parents; not the less anxiously when, as is so often the case, the subject of the malady is their first-born child, on whom so many hopes have centred. In a severe case the future prospect is never really good; but, on the other hand, it is seldom altogether bad. The malady is not one of a progressive character; it does not go on, as the saying is, "from bad to worse." Its tendency is always to a slow improvement, and we may therefore confidently assure the friends that the symptoms will lessen gradually as time goes on. The improvement is very slow during the first half of childhood. The use of the limbs is impaired less by loss of power than by the spasm and incoördination, and the chief improvement occurs when the child can bring deliberate intention to aid the process of muscular training,—which constitutes the most important means of amelioration. Hence considerable mental impairment not only renders the general prognosis more grave, but also lessens the prospect of considerable motor improvement. In almost all cases in which there is not actual idiocy the power of standing and walking is ultimately acquired, although at a period much later than in healthy children, and late in proportion to the severity of the symptoms. Usually also in severe cases the gait presents some enduring peculiarity, sometimes slight and unimportant, sometimes distressingly obtrusive. I suspect that most of the unfortunate creatures whom we sometimes see in the streets, walking along with an unsteady, oscillating gait, and strange consensual motions of the trunk and arms, are really the subjects of this disorder. The hands also become steadier in time, and the amount of disorder in their movement that ultimately remains may interfere less with their use than might be imagined. The prognosis regarding the mental state must be guided by the amount of defect that can be recognised. Mental deficiency is not necessarily allied to the muscular disorder; nor, when it exists, is there any necessary proportion between the two. We can give no opinion until the second year of life is passed, because it is not till then that the existence of slight defect can be recognised with certainty, or the degree of considerable defect can be assessed. In all cases the development of the mental powers will be later than in other children.

It follows, of necessity, from the nature of these cases, that the morbid state is beyond the scope of remedial treatment. When the affection can be recognised, the morbid process itself has long since passed away, and only its effects remain. The damaged brain tissue has passed into a cicatricial state, and such nerve cells as were not destroyed have recovered as far as structural recovery is possible. Drugs are therefore useless, except to combat some of the effects of the disease. If there is a tendency to convulsions, we may lessen that tendency by the means that we should employ in any other case of epilepsy. Remember that it is important to detect that tendency in its early stage. Such patients sometimes suffer from slight attacks of epileptic nature, brief loss of consciousness, or brief spasm, which, in the course of time, will increase to general convulsions unless they are stopped. But the chief treatment must be directed to the training of the motor powers by such means as rhythmical gymnastic exercises. These certainly facilitate the ordered use of the limbs; but to employ the means effectually we must usually wait until later childhood, when more definite power of will can be brought to bear upon the process. After the ability of standing and walking has been acquired the progress of the child is more rapid, and this ability can sometimes be secured by the aid of instrumental support sooner than it would be without such assistance. It is especially when there is spasmodic inversion and extension of the feet, or flexion of the knees, that duly adapted apparatus is useful. Sometimes it is more than useful, it is even essential, in order to prevent the deformity and displacement of the bones, that would result if the child were allowed to stand upon inverted feet. But it is useless to have recourse to instruments until there is such control over the limbs that the apparatus enables the child to stand.

Another question sometimes presents itself, When there is considerable talipes equinus, should the tendon be divided? The operation is never justified in these cases. There is no permanent shortening of the muscle; there is an active contraction, and for this the division of the tendon can do no permanent good. Another question that is often asked is whether electricity would be of any service. To that also the answer must be in the negative. Faradaism would not be thought of in such a case; and I am satisfied from my own observation that voltaism has no real influence over the disorder of movement. Of course, if a child is treated with electricity during six or twelve months, some improvement may be discerned; but the improvement is due to the lapse of time, and not to the applications that have been made. Gentle rubbing of the muscles, especially upward rubbing, lessens for the time the degree of spasm, and such a procedure, often repeated, seems sometimes to have a permanently beneficial influence. In no case can it do harm; and as it can be performed with perfect efficiency by the nurse or mother, it is well to recommend it, especially as it may be employed before other measures are practicable.

Clinical Lecture
ON
ARTHRECTOMY.

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GENTLEMEN,—Mr. Croft has very kindly invited me to deliver one of his clinical lectures at St. Thomas's Hospital, and allowed me to select my own subject. After some consideration I have determined to devote the time at my disposal to an operation which has in a great measure superseded the old-fashioned excision of joints. For I find in talking to senior students about the hospital that they seem to misunderstand the position which arthrectomy occupies in the treatment of disease, and, moreover, look upon it as a mere scraping operation in which a sharp spoon is applied to the interior of a joint after all other methods have proved unavailing. I prefer the word "arthrectomy" to "arthrotomy," which is often used to denote the same operation, because arthrotomy should mean only an incision into a joint; and although arthrectomy, strictly interpreted, means the excision of all the structures forming the articulation, still it is the nearest approach to an accurate terminology to which we can attain without causing confusion with the old

operation of excision; and if we begin to cavil at names we should, I fancy, object to the word "excision," for the synovial membrane was left behind after that operation.

Let us consider for a moment the old operation of excision, and the class of cases in which it was employed. Briefly described, it consisted in freely opening the joint in one of the many ways which different surgeons thought best, and removing with the saw a slice of bone, whether affected with disease or not, from each of the opposing surfaces of the articulation. The synovial membrane was till quite recently left untouched, and nearly all the ligaments were of necessity divided, so that the joint, or what remained of it, was so loose and movable that great care had to be taken to prevent displacement. The patient, also, from the feeling of insecurity which this want of support produced, was frequently troubled during the after-treatment with "jumping" pains in the affected limb. This fault has in great measure been removed in the case of the knee by fixing one bone firmly to the other at the time of the operation by silver wire or ivory pegs. Excision was performed in the first instance only in advanced cases of joint disease, but latterly it has been done by many surgeons much earlier, and with a correspondingly greater success. In the former case, when the joint was disorganised, the operation was performed too late; and in the latter, when it was performed early in the course of the disease, a more severe operation was done than was necessary to procure a successful result.

The operation of arthrectomy is performed early if possible, and aims at removing only the parts which are diseased and leaving all the rest alone. After the joint has been opened a slice of bone is not necessarily removed and the surfaces placed together and left to unite. In fact, very rarely indeed is it requisite to do so, and then only when the disease has been left so long that displacement has occurred, and the deformity cannot be reduced without some removal of bone. The operation in that case does not differ so much from the old excision. But, the joint being widely open, all the synovial membrane which is obviously diseased is removed with scissors or a scalpel. If only a sharp spoon were used, the diseased parts could not be thoroughly taken away, for the *surface* alone is soft enough to be removed with this instrument. As a general rule there is a very distinct interval between the gelatinous synovial membrane and the capsule, which serves as a guide to the operator during this dissection. The capsule and fibrous tissue surrounding the joint is retained, so that it may again be united after the operation is completed. When the larger masses have been removed in this way with scissors, the margin of the articulation itself is treated, and here it will be found that the sharp spoon is invaluable, as it loosens the attachment of the synovial membrane to the bone and cartilage, and enables the operator subsequently to apply the scissors with effect. Each ligament is now in turn examined, and the parts behind and under cover thoroughly scraped out; but unless the ligament has been seriously softened, and thereby rendered useless, it is carefully preserved. The articular cartilage is next examined; if it feels solid and firmly attached to the bone beneath, it is not removed, but any opening or deficiency is enlarged. The gouge or sharp spoon can then remove as much of the softened area as is thought desirable. When the cartilage, on the other hand, is found loosely attached over the greater part of the surface of the joint, it is all easily scraped off and removed. The strumous or tubercular disease of any joint will, as every operator knows, vary greatly in different cases. Sometimes the synovial membrane is the part chiefly involved, and the bone is almost healthy. Sometimes the converse is the case, or the two parts may be equally diseased. The object of this particular operation is to remove only the parts involved, and leave the rest, if healthy, as we find it. Consequently, if the synovial membrane is only injected, and not swollen, it has been my practice not to interfere with it, but to devote my attention to the bone, which would in this case be the part principally diseased. It will be seen, therefore, that this operation is applicable to every variety of the strumous or tubercular arthritis, and that the details above described will vary according to the nature of the particular case you have in hand. The removal of the diseased parts having been completed, thorough and perfect drainage must be provided. If any bone has been extensively gouged, a tunnel or groove had better be made which leads to the surface. Openings in the soft parts must also be formed in the most dependent positions, and when we come to speak of particular joints the most suitable places will be indicated. If the ligaments have not been divided, the joint will be found quite firm; but in advanced cases, where these structures have already been destroyed, it will be desirable, especially in the knee, to fix the bones together by ivory pegs. The soft parts are now again laid down and most carefully united. The fibrous tissues, which have necessarily been divided, are all approximated by catgut sutures, which will not require removal, and then the skin is finally treated in a similar manner with silk or silver wire. The splint selected for the case and the dressing I need not describe.

You will readily understand from what has been said that this operation of arthrectomy differs entirely from excision, and you will now naturally ask in what cases it ought to be applied, and what are the results. My own strong opinion is that the operation should be done early, that it cuts short the disease, and enables the patient more quickly to resume his natural mode of life. I do not believe that we ought ever to attempt to obtain a movable joint, but ought rather to aim at procuring just such a condition of the articulation as is seen after a spontaneous recovery by perfect rest—i.e., freedom from pain and tenderness, absence of all swelling, and, as a general rule, ankylosis. You will say, What is the advantage, then, of this operation? The answer is this: you obtain the same result in as many months as it would otherwise take years to accomplish, and at a period of life when every month of enforced idleness is of paramount importance in the development of youth; and, moreover, you very materially lessen the chances of a subsequent excision—an operation which has not been attended by uniform success. I would therefore urge that so soon as it is clearly demonstrated that the disease has not been arrested in its progress by an apparatus which gives absolute rest, the operation may be fairly looked upon as one for consideration. Doubtful cases, in which it is difficult to say whether the disease is progressing or not, should of course be left for another month or two, till it appears probable that recovery by rest alone is not likely to ensue for some considerable length of time.

The results that are generally obtained by this operation are very striking. In those cases which are submitted to this treatment early in the course of the disease, the joint very quickly assumes a healthy appearance, the wounds as a rule heal with great rapidity, no swelling in the synovial pouches returns, all pain and tenderness disappear, and if the surgeon be satisfied with an ankylosed joint he need fear no further trouble. But in a certain proportion of those cases in which the operation has been performed late in the course of the disease, some recurrence is, in my experience, to be expected. The swelling takes longer to subside, the wounds close less readily, and sinuses oftentimes remain for many months. Some subsequent operation of the same kind (only less severe) as has been previously performed has occasionally to be undertaken. But still the result is decidedly superior to that of excision, and tends more rapidly to convalescence than when the case is left alone. At the same time, some advanced cases yield as brilliant results as any of those in which the operation has been done early; and in those in which this is not the case the general condition of the patient is very much improved, and the local evidences of the disease are very considerably diminished.

Let me now say a few words about the particular joints of which I have had some experience. The hip may, for the sake of convenience, be excluded, as the operation cannot be performed without removal of the head and a variable amount of the neck of the femur, and should for other reasons be considered apart from the question under discussion.

The knee, of which I think every surgeon has had the greatest experience as regards this particular operation, may be opened in many different ways. Some still prefer the old curved incision through the ligamentum patellæ which is used for excision, but it has the very serious drawback that the upper synovial pouches cannot be easily reached, and it is essential that the synovial membrane should be thoroughly extirpated from this region, as I have noticed in my cases of recurrence that this has been the most troublesome part. Other surgeons prefer a transverse or vertical incision through the patella, but in young children it has always appeared to me of very doubtful advantage, as sufficient room is scarcely obtained without lateral incisions, and the cartilaginous patella is liable to give subsequent trouble

when sutured with silver wire. The method which I have of late adopted is a long curved incision through the extensor tendon just above the patella and prolonged downwards on each side to the line of articulation. The patella is then reflected downwards and the whole joint exposed. Even with this incision I have frequently found it necessary to make a vertical one of about an inch in length through the centre of the quadriceps extensor to thoroughly reach the upper extremities of the synovial pouches. But this does not materially damage the cicatrix, which in this incision is much wider than that obtained after the division of the ligamentum patellæ. The difficulty of satisfactorily clearing the crucial ligaments and the posterior aspect of the joint is not so great as one would at first imagine. When the semilunar cartilages have been removed, and they ought in all cases to be taken away if the synovial membrane is the part principally deceased, it is astonishing how easily by flexion and rotation the posterior part of the joint can be cleared of its synovial membrane. As regards the question of drainage for the knee, I hold very strongly that a tube ought to be brought through the popliteal space, so as to effectually drain the inter-condyloid notch. This is easily accomplished in the interval between the two popliteal nerves. A director having been made to project through this spot, it can be cut down upon from the back of the joint. A drainage tube, of which one end is left between the two condyles, is then drawn through. Two other drainage tubes are, in my experience, required, one in each pouch above the articulation, where a good deal of manipulation has been practised for the thorough removal of the synovial membrane. In reuniting the fibrous tissue, especially the quadriceps extensor tendon, a great number of sutures will be necessary, and the most effectual drainage will not, as a rule, come through the lateral bond of union, but will require separate incisions on each side leading into the empty pouches above the knee. Some surgeons have, I know, done without this system of drainage, and obtained successful results. This is not my experience, and time alone will show which is the better practice. If the ligaments have been destroyed and the joint feels movable in the lateral direction, an ivory peg should be driven up from each head of the tibia into the corresponding condyle of the femur, making a way for its passage with a bone drill.

In the ankle the difficulty of obtaining a satisfactory opening into the joint is very great. On the two occasions in which I have performed this operation four incisions have been found necessary in order that the tendons and ligaments might be avoided—one in front and one behind each malleolus. In this way the articulation could be thoroughly scraped out by passing the sharp spoon from one opening to the other, but no dissection and removal of the synovial membrane, such as that which is accomplished in the knee, could be performed. The articular surfaces could be sufficiently separated by traction to introduce the finger, and to obtain a good view of the whole of the interior of the joint. A pair of scissors also could be introduced to cut away the ragged tissue left by the sharp spoon. The patient in the first case in which I performed this operation has recovered with a very serviceable ankle. There is still one small and insignificant sinus (nine months after operation), but no swelling in the grooves around the malleoli. His joint is movable, although no attempt has been made to keep it so, and the limb is still supported on a knee-rest. The patient in the second case unfortunately caught scarlet fever, which was followed by albuminuria, and his parents have removed him from the hospital, so I am unable to tell what the sequel will be. The attack of scarlet fever has so far modified the result that one is unable to quote the case as an example of either success or failure.

The elbow-joint is very easily and effectually exposed by a transverse incision from the radio-ulnar articulation across the back of the olecranon, which is then sawn through and the parts separated. If more space is required, a vertical incision can be carried down from the external condyle over the head of the radius, making thereby a T-shaped wound. In the two cases in which I have performed this operation the disease was in an advanced condition, and a good deal of bone had to be removed with the sharp spoon. The olecranon was then united by strong silver wire to the ulna, and a drainage tube inserted on each side of the joint. No attempt was made to establish any movement, and both cases quickly terminated in healthy ankylosis. Here the possibility of obtaining a movable joint was sacrificed by not performing a regular excision, but as there was a strong family history of consumption in both, and the general health was feeble, I felt that the chances of success were greater after arthrectomy than after the old excision. To show the constitutional condition of these patients, I may add that one of them had previously suffered amputation of the thigh for disease of the knee. A well-ankylosed elbow produces also, to my mind, a more serviceable arm than an indifferent excision, and we cannot always count upon a good result after excision. It remains, of course, to be proved that the results of arthrectomy will always be as good as you have seen in these two cases.

Of the shoulder and wrist joints I cannot yet speak from personal experience.

The operation of arthrectomy is still in its infancy, but great hopes may be entertained that it will be adopted to cut short the disease in its early stage, and that, even when the case be one of an advanced nature, excision may be so far modified as to be limited to a removal only of the diseased parts.

ABSTRACT OF AN

Address

ON

COLD CONSIDERED AS A CAUSE OF DISEASE.

Delivered at the meeting of the Medico-Chirurgical Society, Nottingham, March 23rd, 1888,

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The doctrine stated.—Cold is considered to be the most common single cause of grave disease in this country, and in these latitudes is held to act both as a predisposing and an exciting cause, to produce inflammations and fevers, and to affect all or nearly all the viscera and tissues. It is held responsible especially for bronchitis, coryza, laryngitis, sore throat, pleurisy, pneumonia, pulmonary phthisis, rheumatism, Bright's disease, gastric catarrh, diarrhœa, peritonitis, paralysis from central or peripheral lesion, menstrual irregularity, cardiac diseases, even gout, and with more justification frost-bite, chilblains, and chapped hands. It is held that it may be applied at, near, or at a distance from, the part which becomes affected; that the locality of its application does not determine the seat of the resulting malady; that the extent, duration, and intensity of its primary action are not essential, and do not measure the severity of the disease. The theories framed in explanation of its action are not satisfactory, but until the fact is established that it acts as stated they are not essential. The laity hold somewhat similar views, but in a more crude and rigid form.

Its foundations stated.—These are mainly statistics, showing the greater prevalence of and mortality from certain diseases in the colder seasons of the year. For example, it is thus shown that pneumonia, bronchitis, and pleurisy are more fatal and prevalent in the colder quarters of the year, and less so in the warmer; that bronchitis and pneumonia are more fatal in the colder years; and that rheumatism is more prevalent in winter and spring than in summer and autumn. The geographical distribution of diseases scarcely adds much strength to the doctrine, but bronchitis and pneumonia are said to be more frequent in high latitudes and in exposed situations. Common experience is, however, generally accepted as sufficient evidence.

The doctrine criticised.—It ought to be proved as stringently as any other etiological doctrine, if it is to stand the test of practice, and if it has not been so established we ought to say so. It makes vast claims upon our belief, and thus invites criticism. Some of the chill diseases have already been removed from that group by competent authorities, and that removal has received a large amount of assent. These are such as have been clinically and pathologically defined, of which the etiology and pathogenesis have been made out by more exact methods. The best examples are tubercular phthisis and pneumonia; but to these I would add some forms of coryza, sore throat,

bronchitis, rheumatism, and Bright's disease. The remaining "chill diseases" form a large and rather vague group, for which no very definite cause has been assigned, and which has not yet been divided into definite clinical units. The etiological question to be solved as to these has in consequence not been so stated as to admit of a definite reply. An apparent but needful digression is here intruded and apologised for. The stricter doctrines as to causes which consider them as necessary invariable antecedents—under constant conditions—are not easily applicable in medicine. If they were, we must at once say that these diseases are not caused by cold, although our conclusions become so much the less trustworthy in proportion as we use less stringent tests. The less exact, but still valuable, formula given by Sir Thos. Watson, by which diseases are imputed to certain frequently recurring antecedents with a degree of confidence measured by the uniformity of the conjunction and the rarity of the disjunction of the consecutive events, does not yield certain conclusions, and is, indeed, seldom used with due rigour. More commonly we refer a disease to some apparent outward change, usually held to be competent, such as exposure to cold, and attempt to explain the cases in which no result occurs by assuming a predisposition on the part of those who do suffer. Yet in some simple maladies in which it has been possible to put the question with definiteness the causes have been proved by invariable antecedence, by equality of effect, and by promptitude of action, just as in physical matters. So must the group of chill diseases be dealt with if equally positive conclusions are to be hoped for. They must be divided into defined clinical units, and the etiological question be separately put for each. At present, however, we are taught that the same cause may produce many and very different diseases, and *vice versâ*; or, in other words, that a cause is a variable and inconstant antecedent, and neither measures the intensity nor modifies the quality of the effect. It may be freely granted that where a state of unstable equilibrium exists it may be upset by any one of many diverse and often trivial causes, and that the effects are then determined less by the nature of the disturbing agent than by the kind of relations which subsist between the parts of the mechanism disturbed. Instances of this are common in medical practice. But these cases are not comparable with such diseases as are under consideration, in which we seek the causes of definite diseases in an averagely healthy person. Even where such a state of unstable equilibrium exists, we seek to learn that which brought it about, not so much that which disturbed it, for this may be replaced. We seek what may prevent a malady if it be avoided, or cure if it be removed. It may be as freely granted that disease processes, such as inflammation and fever, are caused by many and different agents; but it does not follow that the various forms of these generic processes are so indifferently caused. The statistical evidence is not a sufficient proof. It tells us not the causes of particular diseases, but some conditions of their action. On such grounds alone we might as well attribute typhus to cold as bronchitis and pneumonia. Moreover, in considering the statistics of disease we must take into account the great variations in nomenclature and diagnosis which exist and impair the value of the data. The topographical distribution of bronchitis and pneumonia in England and Wales, so far as it goes, is in conflict with the current doctrine; and the same may be said of the geographical distribution of rheumatism. Such statistics as exist and are used in support of the doctrine take insufficiently into account the contrary instances. These contrary instances which we see in the now frequent therapeutic employment of cold should also be more fully allowed for. The common experience and general acceptance of the doctrine both by the laity and the profession, although difficult to resist, do not amount to proof. The existing prepossessions are, indeed, pitfalls for the investigator, by giving a bias, which is especially shown by patients who continually state their inferences as facts. The common expression "a cold" begs the question, and yet is in almost universal use. My own experience, after nearly thirty years of rather special attention to this question, leads me to say that only in a very small minority of cases can the fact be established that a sufferer from a malady imputed to cold has been exposed to its influence in any unusual degree at an appropriate time prior to the commencement of the malady. So that I would extend Jürgensen's views about pneumonia to many forms of bronchial catarrh, pleurisy, rheumatism, and some other diseases. The cases in which after the action of severe cold serious disease has so promptly followed as to suggest a causal relation are too few in number to materially affect the argument. This doctrine, which refers to cold the production of so many serious and varied diseases of distant viscera, is difficult to reconcile with such notions of pathogeny as are derivable from the study of the simpler maladies, surgical affections, and experimentally produced diseases. These teach us that, conditions being constant, the effect follows the action of the cause with considerable constancy, and is measured by it; so that any variation of the causal agent or of the subject of its action is followed by a corresponding change in the resulting malady. This doctrine conflicts also with our notions of the pathogeny of inflammation as they are shown in triumphs of modern surgery. Conceiving of inflammation as the reaction of a living tissue to an injurious irritation, the rule seems constant that when the irritant is a simple mechanical or physical one the resulting inflammation is in direct proportion to the irritation, limited nearly in extent to the area irritated, as well as in time to a short period beyond that of the action of the irritant. The effects of cold might be expected to follow this rule, and do so as regards those effects about which there is no doubt. But the visceral diseases imputed to it do not; they much more resemble in their clinical aspect some of the infectious diseases. I am, however, inclined to the view that in some at least of these cold may be a factor in the production of the disease. I venture here to suggest that in these visceral inflammations there exists a real and specific distinction—whether clinically recognisable or not—between the forms of bronchitis caused by, say, cold, or by the pollen of certain grasses, or by an overdose of potassium iodide, or by the morbid virus of measles, and so on; and similarly between the pneumonias which are due to diverse causes. Thus I should expect to find almost as many species of inflammation of internal viscera as we now accept for the skin. Although it may not have equal weight with all persons, I attach some importance to a conflict which, to my mind, exists between this doctrine and the idea I have formed of the evolution of the faculty to inflame—in the sense of the power of living things to react against injuries. To me it seems that this faculty to protect by such reaction is more complete as against the more universally prevalent and long-existing injurious agents than against those of more recent and less constant action, and that organisms are thus better protected against mechanical and physical influences than against organic and organised ones.

Its injurious results are a widespread reduction of the average standard of health, brought about by habits which cultivate delicacy, while blindly incurring other and graver risks than those which it is sought to avoid; and a serious hindrance to the rational treatment of disease by abundant aeration, and to a sound hygienic practice.

Summary and conclusion.—I have tried fairly to state the doctrine, the grounds upon which is supposed to rest, its want of definiteness, as well as the weakness of the evidence put forward in its support; and I have ventured to suggest an alternative hypothesis, less indefinite and more open to proof or disproof. Should my views find favour, I should expect that advantages to public health and to both the theory and practice of medicine would result.

FIFTEEN CASES OF

TUMOURS OF THE BLADDER,

DIAGNOSED BY MEANS OF THE ELECTRO-ENDOSCOPIC CYSTOSCOPE.

BY DR. MAX NITZE.

IN the following lines I wish to direct the attention of my English *confrères* to the value of the electro-endoscopic mode of examination of the male urinary bladder, invented by me. I believe I could not have chosen a more suitable theme for that purpose than a short report of the bladder tumours diagnosed by me cystoscopically; for the diagnosis of these new formations offers the greatest difficulty, and in most cases it has been impossible till now to prove their existence with accuracy without digital exploration of the bladder. By the new method of cystoscopical examination the conditions have entirely changed. One look into the bladder, illuminated as if by daylight, is generally sufficient to afford means for forming an opinion of all

the questions coming into consideration—viz., size, form, and site of the tumour. The accompanying diagrams (Figs. 1, 2, 3, 4) may give an idea of the appearances which the different forms of bladder tumours present endoscopically. I regret that they cannot show the brightness of the light by which one sees the tumours during examination. The celebrated Vienna specialist, v. Dittel, is right in saying "that they offer sometimes truly charming pictures"; especially certain kinds of villous tumours, whose long slender villi floating in the liquid often present a splendid appearance. The following are the cases cystoscopically diagnosed by me.

CASE 1.—A man, aged fifty-five, under the care of Dr. Ch. Mayer, suffered from attacks of hæmaturia for thirty years. During the last six years he has had dysuria and inability to empty the bladder completely. The patient had been examined by the sound repeatedly by eminent

FIG. 1.

surgeons and specialists, but none could give a certain diagnosis. On Nov. 11th, 1886, I undertook the cystoscopic examination. I found on the anterior wall of the bladder a puffy swelling covered with white masses of mucus. (See Fig. 1.) The trigone was covered by a mass consisting of pointed papillæ. On account of the weakness of the patient extirpation was impossible. The patient became weaker and weaker, and died in June, 1887. The post-mortem examination showed the internal orifice of the urethra surrounded by a swelling representing a continuous tumour as large as a small apple. It was found that the instrument had penetrated through the middle of this swelling, which bled easily on pressure. In spite of this the clearness of the picture was not interfered with in the least.

CASE 2.—A man, aged fifty, was obliged to exert a strong pressure in order to empty the bladder. The flow of urine

FIG. 2.

often stopped. He himself introduced a catheter, and on withdrawing it a piece of villous tissue was found. On Dec. 10th, 1886, I saw, on cystoscopical examination, directly and immediately over the internal orifice of the urethra, a villous swelling hanging from the anterior wall of the bladder. (See Fig. 2.) On Jan. 15th, 1887, extirpation of the tumour by means of the high section was performed by Professor v. Bergmann. The size of the tumour (which was as large as a pigeon's egg) and its position corresponded exactly to the endoscopic picture. The patient recovered.

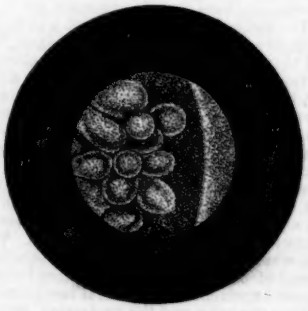
CASE 3.—A patient under the care of Professor Madelung, aged fifty-five, suffered from attacks of hæmaturia. Examination by sound and rectal palpation had given me negative results. On Feb. 20th, 1887, cystoscopical examination was made. On the left side of the trigone a tumour with a broad base was seen, which resembled somewhat a strawberry in size and form. (See Fig. 3.) On March 1st

FIG. 3.

Professor Madelung undertook the extirpation of the tumour. The appearance corresponded exactly to the cystoscopic picture. The patient recovered.

CASE 4.—This was a patient on whom Dr. Israel had performed the high section a long time before, on account of a bladder tumour. The extent was so great that only its most prominent part could be removed. The microscopical examination proved the diagnosis of cancer. Quick healing took place. The patient became free from pain, and the urine became clear. In order to see what had become of the remaining part, the cystoscopical examination was under-

FIG. 4.



taken on April 3rd. It was easy to see that the right lateral wall was covered to an extent of from three to four centimetres with thick masses of verrucous and fungiform excrescences. (See Fig. 4.)

CASE 5.—A patient of Dr. Boegehold suffered from attacks of hæmaturia for six months. Examination by sound gave negative results. The cystoscopic examination at once showed in the region of the left ureter a tumour consisting of long floating villi. The patient objected to an operation.

CASE 6.—A patient under the care of Dr. Goldschmidt had for seven months repeated attacks of hæmaturia and pain in the region of the bladder. Examination by sound and rectal palpation gave negative results. The cysto-

scopic examination, on May 7th, 1887, showed the lower half of the right wall of the bladder covered by dense verrucous excrescences. On account of the great extent of the tumour and the probability of malignancy, operation was not deemed advisable.

CASE 7.—This patient, under the care of Dr. Behnke, had for two years and a half, from time to time, attacks of hæmaturia. The cystoscopic examination showed on the left wall of the bladder a large villous tumour. Soon after I showed the patient to the Gesellschaft für Heilkunde. Many members of the profession convinced themselves by inspection of the evident clearness of the appearances. Operation was proposed to the patient, but he refused.

CASE 8.—A patient, aged sixty-three, in the clinique of Professor Leyden, had for a long time profuse hæmaturia. Examination by sound had given negative results. On July 9th, 1887, cystoscopical examination was made, the conditions being particularly unfavourable. The meatus was narrower than normal; the urine contained much blood, and was of a dark, brownish-red colour. In spite of this the cystoscope allowed of a satisfactory view. Many *confrères* could see the villous tumour hanging from the anterior wall of the bladder. It was as large as a walnut; some of the villi appeared black-coloured in consequence of hæmorrhages. The patient left the hospital soon afterwards.

CASE 9.—A patient, aged sixty, in the clinique of Professor v. Bergmann. For a long time he had had attacks of hæmaturia and difficulty in emptying the bladder. Repeated examinations by sound and rectal palpation had given negative results. On Nov. 14th, 1887, cystoscopic examination was made. I saw on the floor of the bladder a flat button-shaped tumour covered by short villi. The front of the left lateral wall was found covered with similar villi as far as the orifice of the urethra. On Nov. 17th operation (high section) was performed, when the cystoscopical appearances were in every respect confirmed, but at the same time it was observed that the carcinomatous infiltration under the normal mucous membrane was so extensive that a complete removal was impossible. After some time the patient died from the new formation.

CASE 10.—A female patient of Professor Sonnenburg, aged twenty-one, observed for nine months from time to time that the urine was mixed with blood. Lately a well-marked villus was expelled with the urine. The examination by sound showed nothing abnormal. On Nov. 21st cystoscopic examination showed on the outer side of the right ureter a flat coin-shaped tumour consisting of short villi. As the patient was in the fourth month of pregnancy, a radical operation was rejected. Professor Sonnenburg dilated the urethra and scraped the tumour away with his finger-nail. The conditions corresponded exactly to the cystoscopical appearance.

CASE 11.—A man, aged sixty-seven, sent to me by Dr. Behnke, had since January, 1887, attacks of hæmaturia of gradually increasing frequency. On Nov. 30th cystoscopical examination was made. I found on the lowest part of the right wall of the bladder a prominent tumour with a villous surface, as large as a walnut. I removed it by means of the high section on Dec. 9th. Concerning the size, site, and form, the swelling corresponded to the examination. The microscope confirmed the malignant character of the excised swelling. The patient made a good recovery. The wound cicatrised completely, when, in the middle of the new cicatrisation, two suspicious prominences appeared, which grew quickly, and present now a richly proliferating tumour over the symphysis.

CASE 12.—A female patient under the care of Professor Jacobson. For some years she had had intermittent attacks of hæmaturia. Some of the symptoms were in favour of the origin of the blood being from the kidney. On Jan. 21st cystoscopical examination was made. Immediately behind the internal orifice of the urethra, on the floor of the bladder, a tubercular tumour consisting of blunt papillæ was found. Operation was proposed, but refused by the patient.

CASE 13.—A man, aged fifty-three, had suffered since 1885 from intermittent hæmaturia. By degrees the bleeding increased in frequency and quantity. In June, 1887, the patient went into a Berlin hospital, where he was examined per rectum and by the sound by an eminent surgeon. Nothing abnormal could be detected in the bladder. The examination was followed by fever, which continued for some weeks, the patient at the same time losing strength. The loss of blood ceased for a long time, but there occurred pain on micturition of increasing intensity. In November, 1887, there was a recurrence of hæmaturia. On Dec. 15th I undertook the cystoscopic examination, which was rendered difficult from the fact that on introducing the prism copious hæmorrhage took place. In spite of this, I could distinctly observe on the right wall of the bladder a tumour the size of a small apple. I removed the tumour on Jan. 12th, 1888, by means of the high section. The conditions corresponded exactly to the appearances found on cystoscopic examination. The apple-sized tumour hung from a firm pedicle, of the thickness of two centimetres, with its edges curved in so as to resemble a mushroom. The patient recovered.

CASE 14.—This patient, aged forty-nine, had suffered many years ago from gonorrhœa, accompanied by cystitis, orchitis, and suppurative prostatitis. Eventually these gonorrhœal complications disappeared, but a slight catarrh remained. On account of the presence of blood in the urine, Dr. Marc of Wildungen, under whose care the patient was, suspected the existence of a bladder tumour, and sent the patient to me. On Jan. 14th cystoscopic examination showed a papilloma as large as a walnut, situated on the lower part of the right wall of the bladder. On Jan. 25th I excised the tumour by means of the high section. The conditions confirmed exactly what was observed on endoscopic examination. The wound has now nearly healed, and the patient is otherwise well.

CASE 15.—This patient (a man, aged fifty-seven) was sent to me by Dr. Kreissmann, suffering from repeated attacks of hæmaturia, dating from November, 1887. The cystoscope showed an irregularly shaped tumour covered with short villi on the left wall of the bladder, and also a second one smaller in size and more rounded in form. On March 10th I undertook the extirpation of the tumour, excising the tumour together with the corresponding part of the wall of the bladder, after opening the bladder by means of suprapubic operation. The conditions confirmed the appearances found endoscopically. As yet the patient is free from fever.

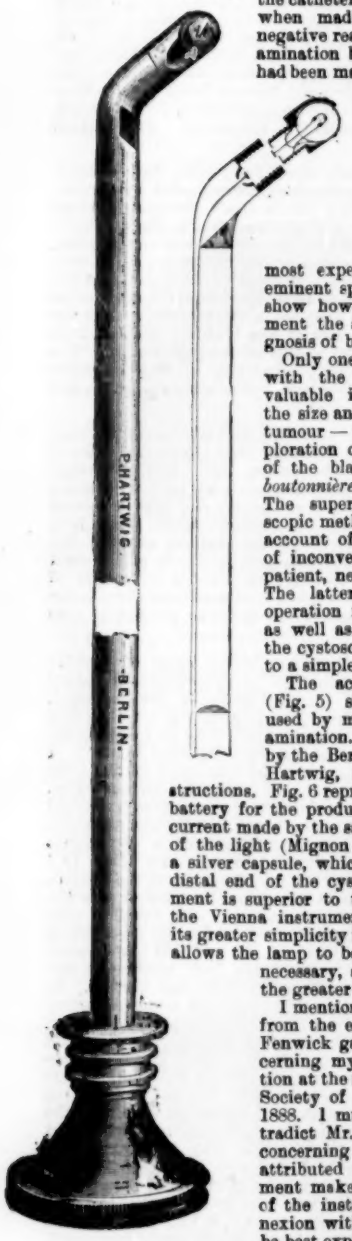
The above shortly[1] described fifteen cases of bladder tumours have been diagnosed by me cystoscopically during the last sixteen months. This is a proof, on the one hand, of the value of the cystoscopic examination; on the other hand, of the fact that the new formations in question are not of so rare occurrence as has been hitherto thought. I would like to emphasise that the important results were often obtained under the most difficult circumstances. In several cases the external orifice of the urethra was found abnormally small; in others (Cases 8 and 11) the examination was made during the occurrence of a continuous hæmorrhage from the tumour; in one case (Case 1) I introduced the instrument through the centre of the tumour, which bled on the slightest pressure. In spite of this the appearances were seen satisfactorily. In the first case a post-mortem examination was made; in eight other cases (Cases 2, 3, 9, 10, 11, 13, 14, and 15) the tumour was extirpated, seven times by the high section—in one case, that of a woman, through the dilated urethra. In these nine cases the endoscopic appearances were in every important respect confirmed in the most perfect manner. In every case my opinion regarding the size, position, and form was found to be correct. It is only in those cases where the edges of the tumour overlap the short pedicle that the latter cannot be observed. Besides, the relative good results of the operations undertaken on account of the cystoscopic appearance may be emphasized. Of the eight patients from whom the tumours had been extirpated none died from the result of the operation. Case 9 proved fatal on account of the progressive extension of the growth. In the eleventh case there was a recurrence, but the patient is still alive. Five patients (Cases 2, 3, 10, 13, 14) must be considered entirely cured. Case 15 is still under treatment, and, as the conditions of the patient are at present (ninth

[1] The first eight cases are more fully described in the Arch. für Chirurgie, vol. xxxvi., Part 3 (Dr. Nitze Beiträge zur Endoscopie der männlichen Harnblase). The full account of the last seven cases will be published soon.

day after operation) in every way satisfactory, a complete recovery is anticipated.

Finally, on comparing the above cystoscopic appearances with the results obtained by other methods of examination, it must be observed that the examination of the urine, in most cases carefully made, had only in two cases shown the presence of villous tissue, which in one instance was brought out by the catheter. The rectal palpation, when made, had always given negative results. Further, the examination by means of the sound had been made in nine cases before the cystoscopic examination. In none of the cases had the sound revealed the presence of a tumour (which in two had attained the size of a small apple), although the examination was made by most experienced surgeons and eminent specialists. Those cases show how imperfect an instrument the sound is for the diagnosis of bladder tumours.

FIG. 5.

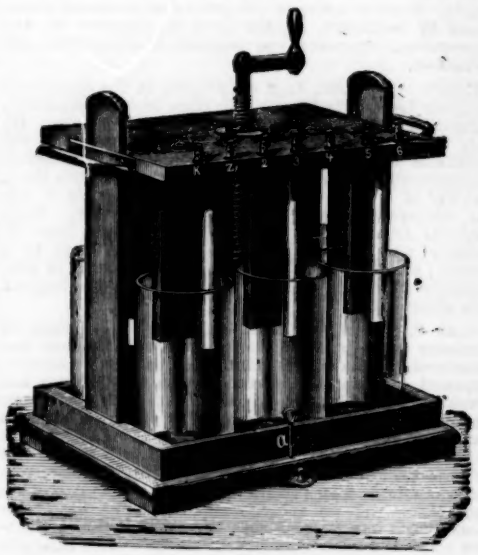


Only one method can compare with the cystoscope in giving valuable information regarding the size and nature of a bladder tumour — viz., the digital exploration of the internal surface of the bladder after a previous *boutonnière*, or the high section. The superiority of the cystoscopic method over the latter, on account of the smaller amount of inconvenience it causes the patient, need not be insisted on. The latter involves a cutting operation not free from danger, as well as deep narcosis, while the cystoscopic method is similar to a simple catheterisation.

The accompanying diagram (Fig. 5) shows the instrument used by me for cystoscopic examination. It has been made by the Berlin instrument maker, Hartwig, according to my instructions. Fig. 6 represents the very simple battery for the production of the electrical current made by the same firm. The source of the light (Mignon lamp) is cemented in a silver capsule, which is screwed into the distal end of the cystoscope. This instrument is superior to that made by Leiter, the Vienna instrument maker, because of its greater simplicity in construction, which allows the lamp to be easily replaced when necessary, and also on account of the greater length of the shaft.

I mention this because it differs from the explanation which Mr. Fenwick gave in his speech concerning my method of examination at the meeting of the Medical Society of London on Jan. 23rd, 1888. I must also strongly contradict Mr. Fenwick's statements concerning the share which he attributed to the Vienna instrument maker in the construction of the instrument. Leiter's connexion with our instrument will be best explained when I say that he had to buy the patent[2] from me first in order to be allowed to make the instrument. Leiter has had no share in those peculiarities which characterise it as new. The introduction of the source of light into the organ had been practically brought about, the optical apparatus enlarging the view designed, the whole construction perfected, the instrument had proved itself useful in examining patients, and had been demonstrated by me in the Saechsisches Landes Medicinal Collegium before Leiter had any idea of the new invention! Also the eventual replacement of the first source of light (platinum wire) had been

FIG. 6.



provided for.[3] Leiter has only made a few technical modifications on the finished instrument. I protest most emphatically against the incorrect explanations given by Mr. Fenwick, and against every connexion of Leiter's name with my instruments. I hope to obtain in England the same generous recognition of my labours in this field that has been accorded to me in Germany.

[2] Deutsche Patentschrifte, No. 6853.

[3] Ibid.

ON THE

MODE OF ACTION OF THE CONTAGIUM AND THE NATURE OF PROPHYLAXIS IN SOME INFECTIVE DISEASES.

BY G. F. DOWDESWELL, M.A.

(*Concluded from page 719.*)

THOSE who advocate the chemical view of either prophylaxis or the pathogenic action of microbes upon the animal organism overlook the fact that the ultimate action of any chemical substance upon the cells of the tissues is clearly physiological; it does not effect a decomposition of the constituents of those cells, as in the splitting up of the molecule of sugar by the alcoholic ferment; so that this chemical theory merely introduces a third factor in accounting for the action of micro-parasites, and is far from explaining or simplifying it. It has not yet been demonstrated or shown probable that in any case a *pathogenic* microbe acts by the production of or forms a soluble chemical substance, and herein is one distinction between septic and pathogenic or parasitic microbes; but, on the contrary, some of the earliest experiments upon the nature of the contagium—a true pathogenic microbe—in anthrax, by Davaine, Pasteur, Tiegel, Bollinger, and others, were by filtering virulent blood, which, when freed from the living micro-organisms by these (or, in some

experiments, other) means, was found to be deprived of all virulence. These results, which disprove the presence and action of a soluble chemical virus in a truly micro-parasitical disease have never been controverted.[1]

The theory of the production of ptomaines or soluble toxical alkaloids in putrefaction, and also of others—"leucomaines"—in the living body, as the product of the morbid metabolism of its cells, has recently been advanced by M. Gautier and others, and is assuming an importance which may greatly influence or revolutionise the pathology and views of the etiology of disease, and not impossibly affect our conception of the *modus operandi* of pathogenic microbes in some cases. It was, however, shown,[2] in opposition to the view of the production of ptomaines, that the toxical action of certain organic fluids was due to the presence in them of insoluble particulate matter, and recently[3] Dr. Wooldridge, pursuing this line of observation, states that a microbe, said to be pathogenic in its action upon guinea-pigs, when cultivated in certain artificial albuminous fluids, produces an insoluble particulate precipitate which is toxical to the same animals. The facts are briefly stated, and no conclusion can be formed upon them; but should they be confirmed and the microbe prove to be *truly* pathogenic, which is doubtful, if it form an insoluble particulate precipitate in the blood of its host, this is an important observation, and may possibly account for the pathogenic action of the micro-parasite in anthrax and other diseases. It is not inconsistent with the filtration experiments above referred to, nor the appearance of embolism with the occurrence of granular matter, which I have constantly observed as above mentioned. More recently still the same writer has stated in a note[4] that, by cultivations in *certain albuminous fluids*, the anthrax bacillus forms a product which, by intravenous injection in rabbits, is protective or prophylactic against infection by subcutaneous inoculation made *immediately afterwards* with active anthrax virus, but that the growth of the microbe itself in the modified fluid is by no means protective, nor is the fluid so when blood serum is used.[5]

Here, *primâ facie*, is a case of protection by the action of a soluble chemical substance, and one apparently toxical to the active contagium; it is, however, as yet too early to form any conclusions upon it. That the case is anomalous and not similar to that of the protection afforded sometimes by the action of a modified living virus (attenuated growth of the micro-fungus) is shown by the fact that cultivations, as stated, in blood-serum do not give the same result; and as it is said that inoculations of the active virus have been made *immediately* after injection of the protective fluid, it may have been retained within the blood-current, without elimination, sufficiently long to have acted toxically or inhibitorily to the active contagium, injected rapidly afterwards, but which would not be the case after some interval, and consequently the result would not be similar to that of vaccination or prophylactic inoculation in other cases. With respect to the statements by Dr. Cash in the same report, that injections of a solution of bichloride of mercury will give protection against subsequent inoculation with virulent anthrax, these cannot be regarded as establishing any conclusions beyond the limited case stated, though the fact is of interest; but as it is stated that the immunity to infection so conferred endures for "five or six weeks," it is conclusive against the view of the action of a chemical counter poison, as such, for it can not be seriously contended that such a substance as corrosive sublimate persists unchanged in the tissues; and the result must obviously be due to its physiological action in increasing the "vital resistance"—i.e., the normal activity—of the cells, and enabling them successfully to resist the attacks of a foreign organism.

That no general conclusion can be drawn from the mode of action of a pathogenic or prophylactic agent in any particular instance is shown by the kindred case of the acetic fermentation, when the same result is produced by two widely different agents—viz., either by the action of a living organism, the *mycoderma aceti*, or as easily by the mere "contact action" of an insoluble and inorganic substance, spongy platinum; but if such a substance by its mere presence in this case can effect the chemical decomposition of the molecule, it is surely not difficult to conceive that the actively metabolic cells of living microbes, the contagium of infective disease, can as readily exert an influence on the delicate cells of the tissues and pre-eminently sensitive nervous elements. This view, therefore, of functional adaptation or acquired toleration of the action of a virus appears the most probable explanation of the cause of prophylaxis or insusceptibility to an infective disease, such as variola, anthrax, or chicken cholera, by the *previous* action of a modified virus; it might, too, be supposed to apply to the case of protection against the effects of *previous* inoculation with a virulent contagium when the latent period is prolonged, as in subcutaneous inoculation with street rabies, where the protective virus, as employed and advocated by M. Pasteur, though modified and attenuated by partial desiccation, is yet of materially shorter incubation period than the former, though unmodified, and may be conceived so to act as gradually to inure the tissues of the animal to the action of the more virulent; but this cannot be supposed to apply to the case of intracranial inoculations with virus of the same character and intensity.

M. Pasteur's view of the *modus operandi* of his modified virus in rabies appears to be, that in inoculations with it *after* infection it acts in precisely the same manner as in those made *previously* to infection, but that it develops more rapidly than the lethal or unmodified virus—"the one which is living"—the fatal microbe,—the action of which, "when present in sufficient quantities," it inhibits. This view, *per se*, offers nothing contradictory or impossible, but it is inconsistent with the measures adopted—viz., a graduated series of progressively less modified, or more virulent, medullas, so as *gradually* to inure the subject to the action of the unmitigated and most virulent, which obviously implies a physiological action of the modified or attenuated virus itself, not that of a chemical or unorganised antidote, as the theory of M. Pasteur requires, according to which it would have been requisite to have employed, whether once for all or repeatedly, a "sufficient quantity" of the antidote at its stage of maximum development, and the lethal, "organised" virus at its *minimal*, without using medullas containing the latter, but little, if at all, modified. The practice thus contradicts the theory, and one or other falls to the ground.

There is, too, another circumstance that creates a difficulty in accepting the view of the occurrence of any prophylactic action in these inoculations for rabies, which is that in all other cases, as in variola, anthrax, &c., when protection or immunity from subsequent infection is conferred, it is by exciting an abortive or modified form of the disease; but here neither after inoculation with the so-termed modified nor with the unmodified virus, either in the dog or in those rare and exceptional cases in the rabbit when they are not fatally infective, are there any appreciable symptoms of disturbance, so that there appears equal difficulty in accepting this view of prophylaxis as that of M. Pasteur of the action of an antidote or counter poison, and the most that can be said is that the disease is one *sui generis*; and if the occurrence of an induced immunity from, or an increased refractoriness to, infection be accepted, it must be admitted that we are as yet in complete ignorance of the mode of action, and that the case is altogether anomalous.

It may well be, however, that in different infective diseases the action of the virus or even its nature may be different; in one case its pathogenic action may be mechanical, as by causing embolism, or by deoxidising the tissues, when the microbe is present in overwhelming numbers throughout the blood; in another, when absent from that fluid, as in tuberculosis and in rabies, where the blood is not usually infective, it most probably acts in a totally different manner. Similarly, the *modus operandi* of protection in different diseases may be diverse. It is remarkable how little attention this subject—of the nature of the virus, and its mode of action when modified and unmodified—has received; and yet, if the methods of prophylaxis and therapeusis are to be anything but empirical, it is the basis on which they must be founded. For this reason I have dwelt at some length upon this point.

It is somewhat singular that at the present time, and within a very short period, articles have appeared by three different writers denying in effect to micro-parasites any

[1] The most recent experiments and results of MM. Roux and Chamberland on this point I have noticed *supra*.

[2] Gaz. Chim. Ital., t. xiii., 1883, p. 172.

[3] Report Med. Off. Loc. Gov. Bd., 1885-86.

[4] Proc. Roy. Soc., 1886, vol. xl., pp. 134, 313.

[5] These experiments do not appear to have been continued, from the Report Med. Off. Loc. Gov. Bd. (1886-87) recently issued, and can only be regarded as suggestive.

etiological relations to disease. It is quite superfluous now to repeat the evidence of their direct pathogenic action in some few cases, the proof of which was first completed with logical conclusiveness in the case of anthrax by Dr. Robert Koch upwards of ten years ago, and must be universally known. Possibly the utterance of these opinions arises as a protest against the tendency, which has become too apparent, greatly to exaggerate the number of cases in which it can be shown that microbes have any causal relation to the diseases in which they appear, and which tendency has brought bacterial pathology into some disrepute, though these mistaken observations or statements do not affect those cases, few in number though they be, in which their relations are conclusively shown. Partly also perhaps it may be due to a feeling of disappointment with the *practical* result of work upon this subject. It was reasonably hoped that, when the active cause of infectious disease was demonstrated, a certain basis for its remedial treatment would be afforded; this hope has been utterly disappointed. Increased attention to sanitary measures has, it is true, to a great extent mitigated the prevalence of some of the most dreaded epidemic and epizootic diseases, but it has done so perfectly irrespective of the results of micro-pathological investigations, and any conclusions as to the nature of the contagium. Amongst these diseases, Asiatic cholera and enteric fever, which has been rightly termed "the scourge and the opprobrium of civilisation," have both yielded in great measure to sanitary precautions, and these diseases are amongst those of which we are as yet in absolute ignorance of the nature of the contagium. In France, indeed, in the epizooties, fowl cholera and anthrax, methods of prophylaxis have been perfected by Toussaint, Pasteur, and others as the result of scientific experiment and microbial investigation, and, it is understood, are practised and found successful upon a large scale; but in this country they have been contemned, and discouraged by a memorandum of the Privy Council, which regards them as practically useless and liable to propagate the virulent disease.

It has lately been said by a most eminent authority in medicine and pharmacology, in relation to the action of bacteria, that the future of medicine will be rather preventive than remedial; but experience as yet goes to show that this consummation must be rather due to general measures of sanitation than to any conclusions founded upon etiological or microscopical investigation.[6] This disappointed expectation is strikingly exemplified in the circumstance that the demonstration by Koch of the micro-parasite of tuberculosis, which discovery has been characterised as one of the greatest achievements in medical science of the present age, has been utterly unproductive of the very smallest improvement in the treatment of the most dire disease prevalent in this country. Beyond that, too, the result of experiments upon the lower animals is directly at variance both with clinical observation and daily experience; and if it be admitted that the microbe is in a strict sense the efficient cause of tuberculosis when inoculated in man as in some of the lower animals, there must be a third factor, as yet unrecognised, in the natural means of infection by this disease; were it not so, it is obvious that infection would infallibly follow from any protracted communication with a tuberculous patient, a result which in the majority of cases is contradicted by every-day experience. Quite recently, too, it has been shown, as is asserted, in two different investigations, that in scarlatina a microbe is the *materies morbi*; and yet, as if to demonstrate the practical inutility of these investigations, we are immediately upon the statement visited by as severe and unmanageable an outbreak of this disease as has occurred for many years.

As a further instance of the extreme confusion and conflicting views prevailing on this subject may be adduced the case of swine fever, in which different observers—as Klein, Pasteur, Loeffler, and Salmon—have described totally distinct organisms as constituting the contagium; and whatever may be the explanation of this, it is quite obvious that the results and conclusions published on this point are worthless. This is disappointing enough, and demonstrates that the result of these investigations is directly antithetical to the object of the experimental method inaugurated by Bacon, which was "humanis commodis inservire," as opposed to the previous philosophy of the schools, the futile and selfish aim of which was to exercise the mind in the pursuit of abstract truth. But, even from a theoretical or merely scientific point of view, the results of the last ten years' laborious investigations are equally disappointing. In no case (not even in the best known micro-parasitical disease—viz., anthrax) is it finally demonstrated or generally agreed what the *modus operandi* of the contagium is, and the general position of the subject cannot be said to have advanced beyond that described by Dr. Burdon Sanderson[7] just ten years ago.[8] I will only add, with respect to rabies, that, unsuccessful for 2000 years as have been all remedial measures hitherto tried, I can see no reason to conclude that effective treatment may not be practicable when we have acquired a competent knowledge of the intimate nature of the virus and its mode of action.

P.S.—The views herein expressed of the unsatisfactory position and uncertain results of bacterial pathology have quite recently, and since the above was written, received a striking confirmation by the conclusions at which Dr. Crookshank has arrived, in continuation of the opinion he shrewdly but guardedly expressed in the last edition of his Bacteriology (second edition, 1887, note, p. 201). From an exhaustive examination of many different investigations in this field, he brings the sweeping charge against several writers of having described as the active contagium in upwards of twenty different cases a common ubiquitous saprophyte, the streptococcus pyogenes. In at least many of the cases so carefully collated, there is certainly strong probability of his conclusions being well founded; and the fact that such an assertion could possibly be made by a competent bacteriologist shows conspicuously the fundamental ignorance that prevails upon the subject, and that such investigations conducted upon the prevailing methods are not merely useless, but misleading. This charge cannot be ignored or slighted, and if unanswered and unrefuted will constitute nothing less than a grave scandal. The cause of this prevailing obscurity and confusion is obvious: it arises from the neglect of, or inability to recognise, the specific characters of form and habit in the microbes regarded and described as pathogenic in these cases; in some instances—though to specify them would be invidious—inattention to these microscopical

[6] Somewhat singularly, however, the same authority endorses the conclusions of Professor Rosenberger that injection of a chemical poison (sterilised septic blood) will produce a disease in the rabbit, with the presence of a micro-organism, which has been regarded and demonstrated, as conclusively as in the case of anthrax, to constitute the efficient contagium. The result of this conclusion, stated explicitly by Professor Rosenberger (Centralb. f. d. Med. Wiss., 1882, No. 4, p. 65–69), is to deny any causal connexion with the diseases in which they appear to microbes, and to regard them as merely adventitious or "epiphenomenal." It is not requisite here to discuss the particular case, which I have already done (Proc. Roy. Soc., 1882, No. 221), but I adduce it as an instance of the present chaotic position of opinion upon this subject; and if these conclusions be accepted, as showing that these micro-pathological investigations, or those on the action of antiseptics or other agents upon microbes that have been regarded as pathogenic or parasitical, are futile, and no conclusions in either preventive or remedial medicine can be founded upon them: I am far, however, from questioning the general proposition that modifications of its environments, such as impaired vitality of the tissues, do affect the development of many so-termed pathogenic microbes. This was shown conclusively many years ago by M. Chauveau (Bull. Acad. Méd., 1873, p. 523, &c.) in experiments upon bistournage in rams, with results that must be familiar to every student of micro-pathology, though there has appeared to be a tendency with some writers lately to represent this old-established conclusion as new; whilst the most recent experiments upon this point—those of MM. Arloing, Cornevin, and Thomas—do but confirm, if they somewhat extend, the original conclusions of M. Chauveau. But what I deny explicitly is that in a true micro-parasitical disease, such as anthrax, or the case here in question, Davaine's septicæmia in rabbits, where the blood is the seat of the contagium, the specific microbe, as asserted by Rosenberger, is present normally in the blood, or can be produced or enabled to develop in that fluid by the action of a sterilised chemical substance. In the case of anthrax, however, similar assertions have been made by Professor Semmer of Dorpat and his pupils (Centralb. f. d. Med. Wiss., 1884, p. 401, &c., *et ubique*). Their results have obviously proceeded from the same cause as those of Rosenberger—viz., imperfect sterilisation of the fluids injected,—and they have rightly received no credit.

[7] THE LANCET, Dec. 29th, 1877, p. 939.

[8] The method, however, of prophylactic inoculation for anthrax and for charbon symptomatique (quarter evil) in sheep and cattle, by intravenous injection of small quantities of unmodified virus, as first recommended by M. Chauveau and by Messrs. Arloing, Cornevin, and Thomas respectively—since adopted and employed upon a large scale by the practical genius of M. Pasteur,—is said to have been investigated at the Royal Veterinary College and found to be successful, whilst the methods of inoculation with a modified or attenuated virus have been unsuccessful. Though the first method may be termed scientific, I should rather consider it empirical; it is at least absolutely independent of the nature of the virus, and of any bacteriological investigations; indeed, in the latter disease (charbon) the nature of the contagium is not yet conclusively demonstrated; the microbe which appears in animals so infected does not appear to constitute *per se* the true *materies morbi*, as in the case of the bacillus of anthrax, where the blood is the seat of infection.

features has resulted in organisms which, comparatively speaking, are conspicuously dissimilar, being regarded and described as one and the same. This specific diagnosis should obviously form the basis of all reliable micro-pathological investigation, in the place of a restless anxiety to publish new and sensational results, however crude—as, indeed, I endeavoured in numerous places for several years to inculcate. To do this is by no means impossible, with competent observation and adequate appliances; and if it continue to be neglected these investigations will remain useless, inconclusive, and misleading.

RESULTS AFTER TWENTY YEARS OF TWO CASES OF EXCISION OF THE KNEE JOINT.

BY HENRY LEE,
CONSULTING SURGEON TO ST. GEORGE'S HOSPITAL.

CASE 1.—Stephen R——, aged twelve, was admitted into St. George's Hospital on Dec. 2nd, 1867. When two or three years old, while running over a grating, his foot was caught and held fast between the bars. The knee was then said to have been dislocated. About a year after this an abscess formed, and opened below the patella. This left a fistulous sinus, through which pieces of dead bone were occasionally discharged. The sinus continued open for six years. A second accident occurred three years after the first, when the thigh bone on the same side was said to have been fractured. The knee had been bent at an angle since the first accident, and the limb had not been properly developed, and a letter from the boy's father stated that Professor Syme had given it as his opinion that the leg ought to be taken off. Three months before his admission a fresh abscess formed and opened on the inside of the knee. This abscess continued to discharge. When admitted the knee was much swollen, and any attempt at motion gave great pain. Excision of the joint was performed on Dec. 12th, 1867. On removing the articular surface of the head of the tibia, the cavity of an abscess was opened, which extended four inches along the shaft of the bone. From this cavity several portions of necrosed and carious bone were removed by means of a gouge. The patella was ankylosed to the femur.

The wound healed satisfactorily, and the discharge from it ceased on Jan. 12th, 1868. A few days after this the patient left the hospital. In July he returned to have a small piece of dead bone removed from the upper part of the tibia. He could now walk firmly by means of a peg attached to the bottom of a lace boot. The shortening from the various causes mentioned was now five inches and a half.

This patient came under observation again this year. The bony thickening about the knee is much greater than usual after excision. He has perfect use of the muscles of the leg and foot, and can walk all day without being tired. The leg is now nine inches shorter than the one on the opposite side. This deficiency is supplied by a patten attached to a lace boot. The lower irons of the patten are convex below, so that one portion only rests on the ground at once, and by means of the foot a rolling motion takes place at each step. In walking it may be seen that there is something not quite natural in the action of the foot; but with regard to the rest of the body there is no limp or peculiarity in his gait.

In this case the great amount of shortening of the limb did not materially interfere with its use, and it need scarcely be pointed out how infinitely preferable the sole of the foot is as a support to any stump that could possibly be left after amputation.

CASE 2.—Edward K——, aged seven, was operated upon on March 14th, 1867, for strumous abscess in the knee-joint. The periosteum was turned down from the sides of that portion of the epiphysis of the tibia which was about to be removed, and care was taken to injure it as little as possible with the saw. No constitutional disturbance, and very little local action, followed the operation. The boy was sent to Margate on May 18th. He was readmitted in 1868. The joint was then movable to some extent in every direction; the soft fibrous tissue between the ends of bone, and a nodule of bone from the head of the tibia, were now removed; a ham splint and long outside splint were applied. Again no constitutional disturbance followed.

This patient reported himself in November, 1879. He could then walk all day or work all day resting on a light iron patten. The limb was six inches shorter than the one on the opposite side. Flexion and extension of the joint were perfect in walking. There was no lateral motion. This was apparently due to little buttresses of bone having been thrown out on each side of the head of the tibia. The patient was so well satisfied with the results of the operations, that I believe I should certainly have heard of him again had he not been able to go on working as usual.

This case, again, illustrates the great advantage, whatever amount of shortening there may be, of keeping the sole of the foot for the patient to rest upon. The play of the muscles of the leg and foot give a much firmer and more manageable support than any artificial apparatus possibly can. It is, moreover, a self-repairing machine; and this is a point which probably those only can appreciate who have been subject to the constant friction of an artificial limb, and to the necessity of having it frequently readjusted. The case also illustrates the fact that where excision of the knee has not left the leg in a condition to afford a firm support for the body, a second operation may be performed with reasonable prospect of success; and, further, that if solid union should not ultimately take place, a very useful movable joint may result.

THE PERIPHERAL OR CENTRAL ORIGIN OF THE EPILEPTIC AURA.

BY JAMES OLIVER, M.D., F.R.S. EDIN., M.R.C.P.,
ASSISTANT PHYSICIAN TO THE HOSPITAL FOR WOMEN.

OCCASIONALLY I have seen patients who experienced for a more or less indefinite length of time, even for years, without evincing any further manifestation of the epileptic disorder, what afterwards proved to be merely the warning of the epileptic attack, when eventually this was displayed with all its characteristic associations. Under such circumstances, the sole disturbance amounted to a temporary and fleeting loss of speech, or some motor or sensory phenomenon, without any further evolutional change, even of the intellectual centres. When, however, the characteristic train of events diagnostic of epilepsy ultimately became developed, the same manifestation of disturbance was so constantly experienced before each paroxysm that it was interpreted by the patient as its "warning." Apart from this aura or warning which many epileptics complain of, the attack, whether this be of the nature of a petit mal with simple loss of consciousness, or of a fully developed fit with all its motor phenomena, is, as a rule, preceded by no feeling or evident sign of indisposition, physical or mental. Sometimes, especially in the more chronic and inveterate forms of the disorder, we find a tendency to moroseness or irritability prior to each recurrence so marked as to render the companionship or even the presence of the individual intolerable. Frequently I have remarked a state almost amounting to augmented physical and mental vigour.

So far we have failed to determine the organ or organs primarily at fault in producing change in the nervous system more or less general and rendering it so highly unstable. I am, however, inclined to view the epileptic individual as epileptic throughout, so to speak, even to the finger tips, and although the discharge may appear to be spontaneously evoked, yet the conditions favouring its evolution are of gradual attainment. In Russian ball-rooms it has been remarked that if the windows and doors be opened, and the air entering be sufficiently cold, the invisible vapour of the room will be so suddenly condensed that it will forthwith fall as snow. Here we have evidence of a sudden change of state resulting from a coalition of two conditions gradually induced. The same thing will doubtless be found true of the epileptic disturbance, the subjective and objective manifestations of which result from a coalition of two or more favourable states existent in the body alone or the

body and its surroundings, and which changes have been more or less gradually evolved. The more frequently a nerve tract becomes traversed by a molecular disturbance of a fixed character, the more susceptible does it become to, and the more readily does it transmit, such impressions, when the conditions favouring the production of such exist. This explains why the epileptic aura, once established, is, as a rule, experienced or evinced before each recurring paroxysm, which it may even be considered as actually inducing.

The seat of origin of an aura, whether central or peripheral, and its mode of action, are still questions wrapt in obscurity. The powerful influence of the association of ideas on certain mental states is undoubted. An individual who has experienced at a certain place a definite and, it may be, terrifying sensation may for ever afterwards experience this same sensation on approaching this spot at any future time. Many cases are on record which support this tenet. An officer, for example, who was accustomed to cross a courtyard one morning felt giddy and fell to the ground; subsequently when he neared this same spot he invariably suffered from a repetition of this most unpleasant sensation, so potent and lasting, apparently, was the mere association of ideas. So long as this officer avoided this part of the yard, strange to say, so long did he continue free from attacks of giddiness. It is possible—nay, altogether probable—that, in some cases at least, the influence of association with concomitant fear may partially explain the efficacy of the epileptic aura in producing an actual fit. The warning is itself undoubtedly an early manifestation of the epileptic disturbance, the predisposition to which already exists in the individual. When experienced, however, it serves to arouse an association of ideas which, aided by the increased susceptibility of the tract to transmit and through habit to call into action, determines forthwith an epileptic attack which otherwise might never have resulted, or might at least have been delayed for a more or less indefinite length of time. The structure of the nervous system is so complex, and its functions so entangled, that not only is it difficult to frame an intelligible description of the aurae or warnings of epilepsy, but in many cases it is wholly impossible to obtain anything like a clear conception of such from the patient's account, especially when the warning is of a sensory or visceral character. Our epi-peripheral and visceral sensations are now through habit ignored by the higher centres; when therefore these are augmented or diminished and thereby appreciated, they are incapable of being compared with or likened to pre-existing or known sensations. The mental state induced by the fear of an impending attack will, be it remembered, interfere with the individual appreciation and interpretation of coetaneous sensations. So completely, in fact, may fear take possession of one, that the sky, as it has been remarked, appears no bigger than a "calf skin."

Accidentally it has been discovered, and by several epileptic patients independently, that the actual fit, when preceded by an aura of a sensory character and referred to a limb, is frequently aborted or ended by the application of a ligature to this limb, the ligature encircling it completely. In order that this may prove efficacious the ligature must be applied proximally so as to intercept the progression of the aura in its radiation towards the central nervous system. The mode of action is, however, still a subject of controversy. Some time ago I saw a female, aged twenty-five, who since the age of fifteen had suffered from epileptic fits initiated by a creeping sensation in the left upper limb beginning in the hand but ascending somewhat slowly, consciousness being retained till the sensory disturbance was experienced in the left shoulder. On one occasion she had the upper arm grasped firmly by her sister when the sensation was felt, and it was remarked that no attack supervened, the sensation itself ceasing to travel beyond the spot grasped. Thereafter it was found possible to avert many of the attacks by merely encircling the limb above the elbow as soon as the sensation was experienced in the hand. The sensory disturbance originated invariably travelled as far as, but never passed beyond, the seat of ligation. This patient for long afterwards never left home without a band round the arm, which she could readily tighten whenever the sensation was felt. After the aura had for more than a year been stayed in its progress by a ligature, it was remarked that the sensory disturbance became spontaneously arrested at the usual seat of ligation, quite apart from the use of the ligature itself. Another revelation of the potent influence of habit. Herpin cites the case of a man who, suffering from cerebral tumour, with concomitant epileptic attacks, was able to stay invariably the seizure by tying a ligature round that arm which was the seat of a well-defined aura. One day, however, becoming intoxicated, an attack ensued which caused death, the usual constricting band having been neglected. Here the existence of the tumour was verified in the region of the arm centre by post-mortem examination. With such cases to strengthen the hypothesis, it has been argued that the aura, although referred to some peripheral nerve expansion, is nevertheless the result of molecular change occurring in some corresponding part of the central nervous system. In the case cited by Herpin it is quite possible that had the patient not been drinking the sensation might have become spontaneously arrested, as I have already remarked happened in a patient recently under my own care. The alcoholic state of the individual cannot be ignored, as it may, in reality, have determined the general spread of the disturbance, and which was so augmented as to cause death. That the aura is the result of a peripheral rather than a central disturbance primarily, will, in some cases at least, appear somewhat problematical. Lately I saw an epileptic patient in whom the warning, which initiated the actual fit, was described as a rushing sound in both ears; yet, as a rule, the noise was terminated, and the epileptic attack, so to speak, aborted, by the act of swallowing. If the ear disturbance had been the result of central change, it is most difficult to understand the part played by mere imbibition. On the other hand, if the sensation be viewed as depending upon peripheral change, a feasible hypothesis may be offered. The Eustachian tube serves to equalise the pressure of the air contained in the internal and that contained in the external ear, and some relative disturbance between the contents of these two aerial passages may serve to evoke in an individual already prone to epileptic disturbance a fully developed fit. In the act of swallowing, however, the Eustachian tube, it is alleged, becomes more patent, a condition favouring the more ready equalisation of pressure, and serving, in such patients as that already referred to, to interrupt the progressional radiation of a peripheral disturbance induced by relative change. In epilepsy a heightened tension of the central nerve cells, and therefore a predisposition to instability, may more or less constantly exist, so that the ordinary peripheral radiations ever going on may at the opportune time serve to excite an apparently spontaneous evolution. Under such circumstances, a progressive instability of the central cells having been induced, we might eventually have a spontaneous rupture. The general epileptic manifestation, having been determined once by a certain molecular disturbance of peripheral origin, is more likely thereafter to be evidenced by this excitation than by any other. Our sensations are the interpretations of peripheral disturbances, and any molecular radiation originating in a sensory tract or sensory expansion will evoke a sensation corresponding with the length and amplitude of the wave. In intussusception of the bowel, it is believed, a reversion of peristaltic action takes place the wave of motion transmitted to the seat of constriction is reflected and travels back. Is it likely, therefore, that a molecular disturbance which originates centrally and is transmitted along a given nerve tract will become quiescent in meeting with some obstruction such as results, say, from encircling the limb by a string? Is it not more likely that the central nerve disturbance already existing would be augmented rather than lessened by such a procedure? If, however, the aura be considered as peripheral in origin and radiated towards the higher centre, already in a somewhat unstable state, an epileptic fit is the consequence, and might not otherwise have resulted. Throughout the organic world we frequently note change produced by the most trivial and almost incredible causes. The local disturbance, induced by a cord encircling a limb, must not therefore be thought inconsiderable. In order that a wave of molecular motion may be conveyed from a peripheral expansion to a nerve centre, or from a nerve centre to a peripheral expansion, the line of conduction must be preserved, the molar and molecular state must be uniformly maintained. The impulse is transmitted by each molecule impinging against its fellow; if this cannot be effected, the radiation of wave motion is interrupted. If the elasticity or tension of a nerve tract be augmented or diminished in any part of its course, it may fail to fulfil that function for which it has become specialised. Mere pressure upon a nerve may so increase the density of the structure, and pro-

duce such an alteration in the arrangement of its particles, as to stay the propagation of wave motion from atom to atom. The ligature, to be effective, must be applied to the limb somewhere between the central nervous system and the seat of initial nerve disturbance; the application of a string which constricts the limb distally to the seat of the aura is futile—a fact which strengthens the hypothesis that in those cases in which the aura is affected by ligation the disturbance is primarily one of peripheral origin.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON STOMACH FLATULENCE IN HEART DISEASE.

BY HENRY F. A. GOODRIDGE, M.D., F.R.C.P.,
SENIOR PHYSICIAN TO THE ROYAL UNITED HOSPITAL, BATH.

IN No. 4 of his papers on the "Effects of Moderate Drinking on the Human Constitution,"[1] Dr. George Harley calls attention to the danger attending flatulent distention of the stomach in heart disease. He conceives that this may sometimes be the immediate cause of sudden death in such cases "from the wind-distended stomach pressing up the diaphragm against the apex of the heart, and so impeding its movements in its weakened state as actually to arrest them altogether." As applicable to certain cases, this view of Dr. Harley's receives my assent; but I have long entertained the belief that the same trouble (flatulence) may occasionally bring about the same disastrous result in a different, and, indeed, opposite, way—namely, by the abrupt discharge of large volumes of wind, entailing a sudden fall of pressure in the vascular system, and with it fatal cardiac syncope.

I recollect, in the early period of my professional career, a young student in Paris, who, after walking about a good deal during a very hot July day, entered a *café* with a *confrère*. Feeling languid and tired, he soon quitted it to return to his lodging. He had hardly proceeded half a dozen yards from the door when he *tout à coup* fell insensible to the ground, as though he had been shot. The passers by picked him up, and in a minute or two he was himself again. The attack was regarded by an interne of M. Bouillaud, who happened to be at hand, as one of *petit mal*. The real fact, however, was, as I have good reason to know, that it occurred at the moment of eructating a large volume of gas from the stomach (without any attendant nausea or vomiting), and the sudden withdrawal of pressure caused temporary failure of the heart's action. Taking into account that this same student is now over sixty, and that he has never had any such experience or other cardiac symptoms since—just, indeed, as he had never had any such before,—it can admit of little doubt that his heart on this occasion, though of course not unaffected by the fatigue and other relaxing influences that had preceded, was quite healthy, structurally and texturally, and his arteries elastic, and so matters soon righted themselves; but had the case been otherwise—that is to say, had he been the subject of any considerable heart disease,—there can be just as little doubt, I think, that such failure of its action might have proved fatal. I need not say that the danger referred to here is practically recognised in the gradual compression of the abdomen with a flannel belt during tapping for ascites—this being intended, indeed, as a safeguard against it. The only difference is that in the one instance we have to deal with fluid, in the other with gas. For obvious reasons the danger would be greater in the erect posture.

Though in the course of practice I have not been without evidence confirmatory of the view above enunciated, such views are, as Dr. Harley seems to admit in reference to his own, by the conditions of the case, not very susceptible of proof. But neither are they very susceptible of disproof; hence, in presence of the vital interests at stake, they may claim some share of consideration. Assuming their correctness, the sufferer from heart disease would seem to be placed, in regard to his flatulent troubles, very much between Scylla and Charybdis; and the practical lesson deducible, I think, should be to prevent as far as possible, by appropriate medicinal and dietetic treatment, the production of flatulence, rather than to trust to any voluntary efforts on the part of the patient to get rid of it after it has arisen.

[1] THE LANCET, March 24th, 1888.

NATURE'S OPERATION OF AMUSSAT, OR CONGENITAL OPENING OF THE COLON IN THE LEFT LUMBAR REGION.

BY SURGEON-MAJOR K. P. GUPTA, M.B., F.R.C.S.

DEBASTULLO, a male child, aged three years and nine months, of healthy Mahommedan parents. The father is somewhat of a nervous temperament. The mother has two daughters without any deformity. She was in labour pains for four days before the child was born. The left lower extremity is deformed, the leg being flexed on the thigh, to which it is attached by a sort of fleshy membrane half-way up—i. e., the upper half of the leg and the lower half of the thigh. The thigh is plump and well nourished, but the leg, especially the lower half and foot, is atrophied. The foot is further deformed by being turned and pointing backwards. The spine is straight from the cervical to the lumbar region, and there it is curved to the right, pushing the sacrum to the right side. At the level of the third lumbar vertebra, and just above the left nates and about two inches below the last false rib, is a triangular sore. The shape is irregular, being a triangle with a broad apex, or truncated, or more strictly speaking, a trapezium. It looks red, but is perfectly dry and free from all discharges, either serous, sanguineous, or purulent. Near the left basic angle is a puckered muscular ring, standing in bold relief of two or three inches above the surface, which acts as the anus, through which the fæces are discharged, the child lying on its left side. The parents assured me that the child had no inconvenience or pain in defecation. The child being timid and afraid of my looking at his deformity, I could not examine more closely by the finger or instruments. The pubes in front has no genitals, which are transposed to the perineum, where the natural anus would have been. The penis is ill-developed, consisting of a glans with a small corpus spongiosum. The testicles are on either side. The child passes urine without any difficulty.

The deformity was noticed while I was inspecting some vaccine operations in a village some fifty miles east of Calcutta. The case is, I believe, unique—being a sort of Nature's operation of Amussat, or a congenital opening of the colon in the left lumbar region, as orginally proposed and recommended by Callisen, and afterwards carried out by Amussat. Nature here, as it were, confirms the wisdom of Callisen's great idea, that the best place for opening the colon and making an artificial anus is in the left lumbar region, and from behind where the peritoneum is deficient.

RECTAL CONCRETION.

BY J. INGLEBY-MACKENZIE, M.B. CANTAB.

THE results of constipation are well known and only too frequently brought to the recollection of members of the profession, but I think the following case presents some points of rarity which may justify its publication.

A. B——, an old gentleman aged seventy-six, called on me on the evening of Nov. 28th, 1887, complaining that "he wanted to pass something, but could not." His anxiety for relief was so great that he did not indicate whence he wanted to pass something. After some cross-examination, I elicited "that the bowels were habitually constipated, but that he certainly had passed nothing for (he said) three days; that something was trying to come away from his bowels now, but could not come; could I help him at once?" After some little trouble, I obtained his consent to examine his rectum, which I found blocked by a fæcal concretion quite as large as a fœtal head at full time, and bearing downwards by ineffectual attempts of the rectum to evacuate its contents. I elicited from him that he had made a long railway journey that day, and presumably the motion of the train had excited to feeble action the languid or partially paralysed nerves of the lower intestine, which set up the irritation from which he was suffering. I explained to him that the speedy relief he

desired was not so immediately attainable from medicine as by the mechanical effects of a *lavement*, to which, after some considerable hesitation, he assented. On account of its great size there was some difficulty in reaching beyond the upper end of the scybalon to wash it away, but after some perseverance and assistance the rectum was evacuated, and he expressed himself happy and comfortable.

The points to be observed in the case were—the great elasticity of rectum, which permitted its walls to be dilated so far in excess of their ordinary calibre; and the stimulus given to the sluggish rectal nerves by the motion of the railway. We are freely conversant with the effects of railway travelling on the bladder, which was alluded to in some admirable papers in THE LANCET on Railway Travelling some years since; but I have never come across any allusion to its effects on the rectum by exciting it to action, and should be glad to learn the experience of others in the matter

A RARE CASE OF PUERPERAL FEVER.

By THOS. P. HARVEY, M.D., L.R.C.P. LOND., M.R.C.S.

AT 2.15 A.M. on Feb. 1st I was called to attend Mrs. T—— in her second confinement. The child was born before my arrival, and the placenta easily removed shortly after. On the afternoon of the third day the temperature rose to 102·5°. The discharge was good, and free from offensiveness; but the milk was scanty. The uterus was at once thoroughly washed out with a strong preparation of "Condy" water, and a two-grain pill of quinine given every two hours. The bowels acted freely. In the evening the temperature rose to 103·2°, and the uterus was again irrigated. On the following morning (fourth day) the temperature was 103·8°, and the pulse 114. I had suspicions that the hyperpyrexia was due to imperfect sanitation in the house. I subsequently found that a watercloset was situated immediately behind the patient's bedroom, with one over it on the second floor, and one under it on the basement. A faint smell was perceived (or fancied) arising from these. The patient was removed into the front room on the same floor. The temperature in the morning for the next seven days varied from 101° to 104·5°, and in the evening from 101° to 102°. The weather was very cold and windy during this week, consequently the house was closely shut up each night. The morning exacerbation was undoubtedly due to the patient breathing this pent-up atmosphere; for in the evening, after the doors (and sometimes the windows) had been opened during the day, the temperature was always lower. For some reason or other the patient was not removed out of the house into more wholesome quarters until the eleventh day. On the first morning in her new abode the temperature was 99·8°. On the afternoon of the fourteenth day she fell into a deep comatose state. The temperature was 99°; pulse 114, jerky and somewhat compressible. Her teeth were clenched, and her lips compressed. She failed to reply to any irritation, and refused even a drop of fluid from a spoon. There was complete unconsciousness. The urine was passed involuntarily. The skin was dusky, the breath sickly, and the tongue, when last seen, thick, dry, with a parchment-like covering, having a deep branched crack down the centre, looking like a fresh wound. She lay in this unconscious state without food for thirty-seven hours. At about 4 A.M. of the sixteenth day, she opened her eyes and spoke a few words to her husband, and drank a little milk. I saw her six hours afterwards, when she spoke freely and drank easily, but had no recollection of the previous two days. Temperature 99°; pulse 102; skin rather dry; tongue as before; urine pinkish, with distinct ammoniacal odour, and one-tenth albumen. On the following day she had a similar relapse of unconsciousness, but not for so long. On the twenty-first day she showed marked improvement, and gradually recovered her usual health.

PROPOSED HEALTH STATION AT TIFLIS.—The Caucasian Department of the Russian Technical Society has appointed a special commission, consisting of Messrs. Bulgakoff, Weisenenhoff, and Coldevin, to work out a plan for establishing a sanitary and balneological station at Tiflis. The Caucasian Medical Society has been invited to co-operate in the work. A sum of 500 roubles has been assigned to the commission by the Technical Society to cover their expenses.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. MARY'S HOSPITAL.

SEVEN CASES OF LUMBAR COLOTOMY, WITH REMARKS.

(Under the care of Mr. A. J. PEPPER.)

WE commence this week a series of interesting cases in which colotomy was performed by Mr. Pepper. In the majority of them there were well-marked symptoms, and the operation was productive of great relief, though in one case it came too late to save the life of the patient.

CASE 1.—S. K——, aged fifty-four, the wife of a carpenter, was admitted on July 10th, 1882. The family history was good, there having been no malignant disease in her relatives. About four years before she had one breast removed for scirrhus, and there was no recurrence of the growth in the original situation; since then she enjoyed good health until a month ago, when she commenced to have pain in the abdomen and lumbar region; she also began to suffer from constipation and pain in defecation. These symptoms increased, and she became very thin. She never passed blood, but occasionally there was a glairy discharge.

On examination per rectum, a hard nodular mass, almost occluding the gut, could be felt about two inches from the anus. The abdomen was enlarged and tender. The constipation had been complete for some days, and on the day following admission stercoraceous vomiting came on. It being evident that there was a large accumulation of fæces and that peritonitis was supervening, an immediate colotomy seemed the only chance of saving the patient's life. This was done on the left side, but she never rallied, and died four hours after the operation.

The operation was rendered difficult by three things:—1st. The kidney was situated much lower than usual, its lower end touching the iliac crest. 2nd. The reflection of the peritoneum was pushed backwards by a considerable quantity of fluid in the abdominal cavity, so that it was impossible to open the gut without opening the peritoneum. 3rd. There was a very large quantity of fæcal matter contained in the colon, the escape of which greatly impeded the last steps of the operation.

A necropsy, held forty-two hours after death, showed that the fatal result was due to perforative peritonitis from scybala. The intestines were greatly distended with gas, and the peritoneal surface was injected and roughened, and in the pelvic region coated with flakes of lymph. There was a large quantity of turbid yellowish fluid in the abdominal cavity. The cæcum and descending colon were greatly distended with fæces. On the anterior surface of the cæcum, just below the ileo-cæcal valve, was a perforation one-eighth of an inch in diameter, the tissue around being of a dark purple colour and coated with lymph. On removing the cæcum and opening it, the perforation was seen to be in the centre of an ulcer, and close to it were two or three other ulcers varying in size from half an inch to an inch. Two inches from the anus a firm scirrhous mass was found, extending upwards for an inch and a half, and nearly blocking the lumen of the gut. The mucous membrane over the growth was not ulcerated, but there was a small patch of ulceration higher up the rectum. The kidneys were normal in size and structure, but the left one was situated lower than usual, touching the iliac crest, and the right one was adherent to the colon. There were small secondary growths in the liver and in the left lung, especially at its base.

The chief points of clinical interest in this case were: Firstly, the absence of recurrence in the primary seat of disease after an interval of four years; secondly, the appearance of a fresh growth in the rectum, with secondary deposits in the viscera; thirdly, the ulcerative perforation of the

cæcum from long-continued pressure of scybala. The last condition affords a reason for opening the colon on the left side unless especially contra-indicated; for if the operation be performed on the ascending colon there is little chance of the overloaded transverse and descending colon being emptied by reversed peristalsis; and cases are known where, after a successful colotomy, the patient has succumbed to perforative peritonitis, caused by the pressure of fæces retained beyond the artificial anus.

CASE 2.—E. G——, aged sixteen months, was admitted on Sept. 9th, 1885. The patient was fairly well developed, and had enjoyed good health until three months previously, when she had a slight accident, to which her mother attributed the origin of the disease for which she was admitted. The child was walking, when she slipped and fell, striking her left buttock against a piece of wood. There was no sign of any injury at the time, and nothing more was thought of it until three days later, when the mother noticed a swelling, the size of a walnut, on the left buttock. The child was seen by a doctor, who thought that an abscess was forming, but the tumour rapidly increased in size and the patient lost flesh. The doctor punctured the swelling twice, but only a little blood escaped. The parents were healthy, and there was no history of malignant disease in the family.

On admission the child seemed cheerful and could walk, but in doing so the left leg was rotated inwards. On the left buttock was a large globular tumour, which measured thirteen inches round the base and nine inches over its greatest convexity. The skin over it was smooth and shining, with here and there a few red patches, and numerous large veins were distinctly visible. The tumour was elastic to the touch, and pressed on the anus, displacing it a little, so that the motions were flattened. There appeared to be no pain in the part.

The patient remained in the hospital until Sept. 16th, when she was removed by her mother. During her stay the tumour became larger and encroached on the rectum, causing pain and straining in defecation.

On Sept. 19th the patient was again admitted, the tumour having become larger and darker in colour. The anus was drawn towards the affected side, and was extroverted, but the motions were not flattened; there was, however, considerable pain during their passage. On the 24th the tumour began to fungate at the margin of the anus, and two days later the motions were accompanied by blood. The pain and escape of blood during defecation increased, and on Sept. 30th left lumbar colotomy was performed. The operation presented nothing unusual, the incision required being two inches in length, and the gut was easily found without exposure of the peritoneum.

The patient remained in the hospital until Oct. 9th. During that time the wound healed, and the fæces as a rule were passed through the artificial anus, but on three occasions a small motion was passed by the natural orifice. The patient's general condition was good, with the exception of the temperature, which commenced to rise two days after the operation, and subsequently was usually about 100°, on three occasions rising to 102°.

On Oct. 14th the patient was again admitted, and there was a marked alteration in her appearance, she having become very thin. During the time she had been away profuse diarrhœa had come on, the discharge causing the skin around the artificial anus to become inflamed. The tumour had increased greatly in size, and was extending into the perineum and across to the right buttock. There was great difficulty in micturition. From this time she became rapidly worse; the diarrhœa could not be entirely stopped by medicine, and usually took place from the artificial anus, rarely per rectum; the tumour increased, and on Oct. 23rd measured eighteen inches in circumference and fourteen inches across its greatest convexity, and involved the perineum. At this time the difficulty in micturition became so great that a catheter had to be used. A large slough formed on the summit of the tumour, and the patient died exhausted on Nov. 9th. There was some discharge of blood from the anus, but no fæcal matter passed after the end of October. The temperature was usually about 100°, but commenced to rise a day or two before death and reached 104·2°.

At the necropsy, held forty-eight hours after death, the condition was as follows: Body greatly emaciated. A large tumour, symmetrically disposed and of an ovoid form, descended from the sacral region. The skin over the posterior aspect of the tumour had sloughed, leaving an ulcer the size of a saucer, and the superficial veins were very large and engorged. The tumour filled the lower part of the pelvis; it was limited above by the recto-vesical fascia, which was expanded over it. A section showed the tumour to be imperfectly encapsuled, in colour and consistence like a fibrinous clot, modified here and there by mucoid degeneration, and with cavities formed by hæmorrhages and necrosis. Under the microscope, a section showed a meshwork of fine connective tissue fibres, with groups of small round cells, and a large amount of mucoid intercellular substance. The vessels were large, numerous, and thin-walled. The descending colon had been opened just below the costo-colic fold, on a level with the middle of the kidney, and the lips of the opening into the gut were perfectly united with the external wound. There were no intra-peritoneal adhesions in the neighbourhood of the wound. The transverse colon and the first portion of the descending colon as low as the kidney had a long meso-colon, but just about the colotomy wound the meso-colon was imperfect, leaving the outer and hinder part of the gut uncovered by the peritoneum over a small space. The colon above the wound, and for some distance below, was full of clay-like lumps of fæces. The other organs were normal.

It seems probable that the blow was the exciting cause of the tumour, and that the case was therefore an illustration of the principle of traumatic malignancy. As regards the operative treatment, it will be seen that there was no difficulty in opening the colon behind the peritoneum—an anatomical fact of much importance, considering the extreme youth of the patient.

CASE 3.—M. G——, aged sixty-three, a widow, was admitted on April 28th, 1886, for diarrhœa and pain in defecation accompanied by a discharge of blood from the bowel. The patient's mother died of phthisis, and one sister from cancer (probably of the liver). No other members of the family were known to have suffered from malignant disease. Her health had always been good until two years before admission, when, after she had been nursing her sister (who died from cancer) for some time, she noticed that her motions were less solid than usual, very fetid, and mixed with a bloody discharge, their passage being attended by slight gnawing pain in both groins; she also felt weak, but did not lose her healthy colour. In a few weeks these symptoms had nearly disappeared, there being only a slight discharge, and she remained in good health for about six months, the discharge, however, continuing. At the end of that period the old symptoms returned and gradually became more marked, culminating in November last in a very severe attack of diarrhœa.

At the time of her admission the patient was fairly well nourished, and without any cachexia. She complained of a bearing-down pain in the lower part of the abdomen, which was relieved when she lay on her back. The abdominal walls were soft, and no tumour could be detected on palpation; but on passing the finger into the rectum, there could be felt, about three inches and a half above the anus, a hard mass, the size of a small orange, immovably attached to the left side of the sacrum. There was diarrhœa, and also a bloody discharge of a most offensive odour.

On May 1st left lumbar colotomy was performed, the colon being easily opened without injury to the peritoneum. The middle of the kidney was exposed. The temperature went up to 100·2° on the day following the operation, but this gradually came down, and the patient went on well until May 6th, when she complained of pain in the region of the wound, and in the evening the temperature was 102·2°. This was the commencement of a severe attack of erysipelas, which lasted until May 31st, on which date the temperature was normal, and a day or two afterwards the patient began to get up. The temperature remained normal until June 23rd, when it rose to 102·8°, and there was some inflammation about the artificial anus; poultices were applied, and in a day or two the symptoms vanished, the patient being discharged on July 3rd.

The subject of the above notes is still alive, and very well in general health, but the growth has implicated the bladder. The opening into the colon is quite healthy, and there does not appear to be any evidence of secondary growths.

The report of these cases will be concluded in our next impression.

NEWCASTLE-ON-TYNE INFIRMARY.

INJURY TO THE HEAD; SYMPTOMS OF FRACTURE OF THE BASE OF THE SKULL; NECROPSY; REMARKS.

(Under the care of Mr. PAGE.)

THE following case was reported by Mr. Wm. Baigent, house surgeon.

J. S——, aged thirty-eight, a sailor, who had fallen twenty feet, was admitted on Dec. 5th, 1887, at 1.30 A.M., in a cold, insensible condition. There was a fracture of the left femur, hæmorrhage from the left ear and nose, and ptosis of the right eye. There was no wound of the head or face, and no depression could be felt.

At nine o'clock the same morning the man was conscious, but restless. He complained of pain around the head, particularly behind the left ear; the ptosis was more marked, and there was partial loss of sight in the eye of the same side. The hæmorrhage from the nose had stopped, but continued from the left ear. On Dec. 7th the patient was conscious, restless, and irritable; the ptosis was still present, but the discharge of blood from the ear had gradually assumed a serous aspect, and was now copious and clear. From this time the discharge gradually diminished in quantity, and by Dec. 14th had disappeared. For the next six weeks the patient remained apparently quite well, with appetite good and temperature normal, when on Jan. 24th, 1888, after going about on crutches for five days, there was a return of discharge from the left ear, which was more purulent in character than on the previous occasion. The temperature was normal, and the patient expressed himself as feeling quite well. On the morning of Jan. 25th, 1888, the man did not take any dinner. In the afternoon he experienced a chilly sensation. At 3.30 he had a rigor, which was neither severe nor prolonged. An hour later he vomited, and at 6.30 was in an unconscious state, with back arched, legs flexed upon the thighs, and thighs upon the abdomen. The urine was passed involuntarily. The eyes, with pupils dilated and inactive, wandered to the left; the right disc was white, the veins were distended, and the arteries were small; left disc red. Temperature 104°; pulse 130. On the following day the patient remained in the same condition, and in addition there was nystagmus of both eyes.

On January 27th Mr. Page made a semilunar incision in the temporal region, and trephined one inch and a half above and a quarter of an inch behind the left auditory meatus. On removing the circle of bone, the membranes bulged into the opening; they were incised, but no pus was found. The long fine needle of an aspirating syringe was then passed in several directions into the brain, with a negative result. The flap of skin was then replaced and the wound dressed antiseptically. The patient died on the following day.

At the post-mortem examination, pus was found beneath the dura mater in the longitudinal fissure between the frontal lobes. On the base of the brain, about the under surface of the pons and medulla surrounding the cranial nerves, was purulent lymph. In the left fissure of Sylvius was some dark, firm, though comparatively recent, blood clot, which extended into the fissures and sulci of the brain in the neighbouring parts. The brain substance itself was congested, and here and there, especially beneath the frontal lobes, the section revealed pus beneath the arachnoid. After careful and prolonged search no fracture was found.

Remarks by Mr. PAGE.—This case illustrates the necessity of diagnosis and of prognosis attending an injury to the head. The signs of fracture of the base were well marked—bleeding followed by clear watery discharge from the ear, ptosis, and insensibility. Seven weeks after the accident, the patient having been apparently well for fully five weeks, head symptoms quite unexpectedly arose, and after death no fracture was found, simply purulent meningitis.

KIDDERMINSTER WORKHOUSE INFIRMARY.

STRANGULATED INGUINAL HERNIA.

(Under the care of Mr. J. LIONEL STRETTON.)

J. F——, male, aged seventy years, said he had been ruptured for many years, and had worn a truss. On Oct. 19th 1887, the rupture came down, and he was unable to get it back. He had left the truss off because it was not comfortable. He was seized with great pain and vomiting. He was put to bed, given opium internally, and ice was applied to the tumour. This gave him great relief, and he was able to reduce the rupture himself. After this he passed a comfortable night, free from sickness. In the morning (Oct. 20th), however, his symptoms reappeared, and when seen he presented the usual signs of strangulated hernia. On examination there was a small soft swelling, about the size of a walnut, in the left groin. There was no impulse on coughing, and, although easily pushed up out of sight, it immediately returned again.

As the man's symptoms did not give way to treatment, it was determined to put him under an anæsthetic, and, if necessary, operate. Ether having been administered and the parts fully examined, an endeavour was made to reduce the swelling, but without avail. Mr. Stretton invited a medical friend to examine it, and he was able almost immediately to reduce the swelling, so that it did not return in spite of a good deal of coughing (the result of the ether). As the gurgle had been distinctly felt in reduction, the conclusion was formed that the bowel had been returned into the abdominal cavity. A pad and bandage were then applied. As the effects of the ether passed off there was a good deal of pain, and the sickness recurred. On removing the pad about six hours afterwards, the lump had returned, though smaller in size. He was again placed under ether, and an incision made. In dissecting downwards, two distinct orifices were discovered at the neck of the sac, and on careful examination the lower one was found to communicate with an artificial sac containing about a foot of intestine, the upper one, where the strangulation existed, communicating with the abdominal cavity; this was nicked, and the bowel slowly drawn out from the false sac, and returned into the abdominal cavity.

The usual after-treatment was adopted, and the man made an uninterrupted recovery. His temperature never exceeded 101·2°, and his bowels acted naturally on the fourth day.

March 27th, 1888.—He now wears a truss, and has not experienced any discomfort since the operation.

Remarks by Mr. STRETTON.—The above case corresponds with the third variety of displaced herniæ described by Birkett, and its rarity renders it worthy of report. It also explains the wisdom of exploration in all cases where symptoms of strangulation persist after a supposed reduction. The age of the patient and his rapid recovery are also worthy of mention.

GOVERNMENT HOSPITAL, NAGASAKI.

FRACTURE OF THE ZYMOTIC PROCESS OF THE TEMPORAL BONE.

(Under the care of Mr. C. H. ARNOLD.)

TOKARA T——, aged twenty-two, a native of Nagasaki, was sent to the Government Hospital on July 9th, from the Peninsula and Oriental steamer *Thibet*, with an injury to the face caused by a violent blow from the heavy iron hook at the end of the chain attached to the steam crane used in discharging and taking in cargo.

On admission the patient presented a swelling about the size of a pigeon's egg, two fingers breadth in front of the left ear. There was also an odd expression on that side of the face if viewed in profile, but not sufficient to amount to a deformity. The patient could open and close the jaws and speak distinctly, but the motion from side to side, and also the act of swallowing, were very painful. On close examination and manipulation, a distinct fracture of the zygoma was perceptible between the coronoid and condyle of the inferior maxillary bone. The replacement of the broken fragments was most difficult, but by inserting one forefinger inside the cheek and pressing with the other hand outside, above the zygoma, the broken ends were at length brought into perfect apposition. Further treatment consisted in the application of a four-tailed bandage, two ends being tied above the head and two behind the neck. Only liquid food was given.

The only points of interest are the difficulty of securing apposition of the broken ends, and the ease with which it was maintained when once secured.

DEATH UNDER CHLOROFORM.—A boy aged three years died in Newcastle Infirmary on the 16th inst., whilst undergoing an operation under the influence of chloroform.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Pedunculated Body in Knee Joint.—Alcoholic Paralysis.—Cervical Tumour.—Gangrene.

AN ordinary meeting of this Society was held on April 17th, Sir James Paget, F.R.S., President, in the chair.

Mr. S. G. SHATTOCK related a case of rare variety of Pedunculated Body in the Knee Joint. He was unable to find a description of such a structure in the work of any surgical writer. Projecting into the knee joint on the right side and immediately below the patella was a discoidal body 0·4 cm. in the transverse diameter, 3·2 cm. in the vertical, and 0·7 cm. in thickness. It was invested in a thin capsule of connective tissue, continued into a falciform synovial fold on the right side, which fold was lost on the adjacent border of the patella in the general synovial membrane. It lay immediately below the patella, passing a little way beyond the middle line to the left side; by its upper part it rested on the lower triangular non-articular division of the posterior surface of the bone, its upper border being accurately adapted to the lower margin of the articular surface. At first sight it appeared to be simply a local overgrowth of the fat which was naturally present in the synovial fold of the alar ligament; but through its surface could be seen blotches of dull orange-red, characteristic of hæmorrhagic extravasation, in which secondary changes had occurred, whilst incision showed the pendulous body to be quite firm and compact in substance, without discernible structure, and of greyish-white colour, marbled with rusty-red. Histologically, it consisted of a faintly stained meshwork of homogeneous or finely granular nebulous substance, in the meshes of which were collections of reddish-brown granular pigment. The meshwork was in some places coarse, with thick inter-communicating trabeculæ; but in others the trabeculæ were finer, and arranged with some degree of parallelism. In the latter parts the structure of true fibrous tissue was closely simulated, the simulation being increased by the presence of sparsely scattered corpuscles, the leucocytes of the blood originally shed. It was undoubtedly due to an old hæmorrhage into the alar ligament.—Mr. BOWLBY referred to a specimen in the museum of St. Bartholomew's Hospital, taken from a man who wrenched his knee by violent extension. This was followed by acute synovitis, and three months afterwards a loose body was recognised, and was removed by direct incision; it consisted of a torn portion of synovial membrane, between the layers of which hæmorrhage had taken place. In a second case a loose body was removed by incision and division of its pedicle; it consisted of a torn piece of synovial membrane thickened by inflammatory products. A third case was shown, in which the patient sustained a wrench of the knee, and a year afterwards a loose body was found and removed; it proved to be a portion of the internal semilunar fibro-cartilage, which was torn up from its posterior attachment. He showed also a jar containing 415 loose bodies removed from the knee joint of a man who had suffered from rheumatic fever; they were composed throughout of hyaline cartilage, and only four or five of them had pedicles. Lastly, he exhibited a portion of separated articular cartilage removed from the knee of a lad of eighteen; there was no history of injury; a loose body was found in the left knee, and later one was removed also from the right.—Mr. GODLEE showed a specimen, sent by Dr. Lediard of Carlisle, of a dislocated and loose semilunar fibro-cartilage. He himself had once removed a loose body from a knee joint, which turned out to be a broadly pedunculated fibro-fatty mass.—Mr. H. CLUTTON showed loose bodies which had been removed from the knee joints, one being taken from the right joint in 1885, the other from the left joint of the same subject in 1887. The interest of the case lay in the symmetry of the affection.—Professor HUMPHRY confessed he could not satisfactorily explain the case of detached articular cartilage. He supposed that portions of cartilage and bone might be removed by quiet necrosis. He had seen specimens in which loose bodies lay in hollows of articular cartilage, they having originated in the synovial membrane, and then hollowed out beds for themselves in the cartilage. With the exception of Simon's case, he knew of none in which articular cartilage and bone had been detached by violence. He wondered if a violent contraction of the popliteus muscle might not tear away a fragment of cartilage and bone with its tendinous attachment. Loose bodies might lie quiescent for months or years, and then a wrench or strain might displace them and give rise to symptoms.—Mr. HOWARD MARSH thought that Simon's case furnished conclusive evidence that a piece of articular cartilage might be chipped off by injury. He referred to two cases placed on record by Klein and by Teale of Leeds, in which portions of articular cartilage had become separated by quiet necrosis set up in both cases by injury, and Klein expressly stated that his case could not be accounted for by supposing that a loose body had slipped into the joint and caused a depression in the cartilage by atrophy from pressure.—Sir JAMES PAGET said that in his paper on quiet necrosis he was referring to the process in osseous tissue only, and evidently the credit of first describing the process in cartilage belonged to Teale. He had met with many cases showing that strain could set up periostitis and even necrosis. He quoted a case in which a young lady strained her deltoid in a gymnasium, and this was followed by necrosis of the acromial process.

Dr. SHARKEY read the notes of a case of Alcoholic Paralysis of the Phrenic, Pneumogastric, and other Nerves, in a woman of thirty-two, who had always been delicate, and seven years ago had been treated at St. Thomas's Hospital for a liver complaint. For some years she had been in the habit of drinking hard, and had taken principally whisky and beer. She had suffered from diarrhœa for three years, and six months before her admission had an attack of hæmoptysis. Lately she had been losing flesh and getting weaker, especially in the legs, and had appeared "queer in her head." For two months she had vomited nearly everything she took, and had lived almost entirely on beer. On admission she was well nourished, with sallow complexion and well-marked venous stigmata upon the cheeks. Her answers were incoherent, though she understood what was said to her. Pulse 130, weak; respiratory sounds harsh, but no evidence of pulmonary disease; liver enlarged and hard; no albumen in urine. The legs were wasted, the muscles along the front of the tibia having suffered most, but all the muscular movements were very deficient in power. She could neither walk nor stand; there was marked superficial and deep tenderness; the knee jerks were absent, but the plantar reflexes were present. During the first week the pulse remained rapid, she had nocturnal delusions, and cramps in the arms and legs. Later she had attacks of paroxysmal dyspnœa, often accompanied with pyrexia and shivering, and with rapid pulse and respiration; she frequently had difficulty of swallowing. The respirations rose to 40, the pulse to 140, the diaphragm became quite paralysed, and the abdomen was drawn in during respiration, while the upper part of the chest acted with unusual energy. Distinct evidence of phthisis developed, and she died during an intense paroxysm of dyspnœa. At the necropsy, the heart was pale, but not fatty, the lungs presented evidence of early tubercle, the liver was cirrhotic, the kidneys hyperæmic. In the lower cervical and dorsal regions of the spinal cord there was softening. The microscope revealed slight general inflammatory vascular changes throughout the whole central nervous system. In the lumbar enlargement of the cord, and on the level of the origins of the fourth and fifth cervical nerves, there were signs of inflammation, with degeneration of the cells of the anterior cornua. There were signs of intense inflammatory changes in the phrenic, pneumogastric, and popliteal nerves, and in the muscles supplied by them, the connective tissue spaces being beset with numerous leucocytes, and the fibres more or less altered in texture. The case was one of early alcoholic paralysis, which was still progressing; the microscopical evidence pointed to the presence of an acute inflammation. The fact that the pneumogastric nerve and heart's muscle were both the seats of inflammation showed that the vagus probably bore the same relation to the nutrition of the myocardium that the motor nerves of the limbs did to the muscles they supplied. The whole trunk of the pneumogastric nerve was involved, and the symptoms which made it possible to diagnose this lesion were interesting—viz., extreme and constant rapidity of cardiac action, increased dyspnœa in paroxysms without evident heart disease, the difficulty of getting food past the pharynx, and great feebleness of voice; the latter symptom might, however, be in part due to the phrenic lesion. The microscope showed that the inflam-

matory processes were most intense in the peripheral nerves and their muscles, less so in the spinal cord, and that the brain and medulla oblongata had suffered least. The extreme congestion of the liver and kidneys might be due to peripheral paralysis of their vaso-motor nerves or of the centres of the latter. The association of alcoholic paralysis and phthisis had been before remarked on. There were two conditions at least required for the production of phthisis: firstly, some impairment of the nutrition of the lung; and, secondly, the tubercle bacillus. He thought that the first of these might be produced in alcoholic cases by trophic changes, lighted up in the lung by peripheral neuritis either of the pneumogastric or of other nerves which supplied these organs. Considering the present state of our knowledge with regard to the effects of alcohol on the body, it must be allowed that its tendency to affect peripheral nerves opened out for it an almost unlimited field of action.—Dr. ORMEROD said that the majority of cases of alcoholic neuritis got well if the cause were removed. He quoted a case bearing on sudden death from pneumogastric lesion. A child was convalescing from diphtheria, but large abscesses formed in its neck, and it died suddenly. At the necropsy one of the vagi was found involved in the wall of an abscess, and was quite flattened out.

Dr. J. GRIFFITHS brought forward a case of Tumour of the Neck invading the Jugular Veins, from a man forty-seven years of age, who first noticed a small movable growth in the upper part of the neck involving the upper third of the sterno-mastoid muscle; it grew slowly, and gradually extended into the external and internal jugular veins; from these it extended by way of the vessels, but without causing any thrombotic changes, into the cavity of the right ventricle, and then into the pulmonary arteries, blocking them, and causing the death of the individual after a period of nearly six months. The tumour grew in the interior of, and was firmly attached to, the walls of the venous channels, and consisted of connective tissue in various stages of development and degeneration. Microscopically, the growth showed fibrous tissue arranged in an irregular manner, and it was not easy to classify it. He referred to a case of enchondroma of the testis, which produced secondary growths in the vena cava. In his case there was evidence to show that the growth originated in the small venules of the sterno-mastoid muscle.

Mr. BOWLBY brought forward a series of specimens to illustrate the subject of Gangrene from Embolism and Thrombosis. The first was a case of gangrene of the hand, occurring in a labourer sixty-three years of age, who had been always healthy, but had suffered from heart disease for two years. Fourteen days before admission he was seized with sudden shooting pain in the right thumb, which became numb and cold. Gangrene spread to the whole of the hand, there was no radial or ulnar pulse, and it was very feeble in the subclavian. He died, and there was found mitral and aortic disease. There was a large embolus in the right axillary artery, and a second at the bifurcation of the brachial. The second case was one of gangrene of the leg from embolism of the right popliteal artery, for which amputation was performed. The patient died from hemiplegia, and post mortem there were found evidences of multiple embolism. The third case was one of gangrene of the thigh and leg from embolism of the right femoral artery. A large embolus plugged the common femoral at its bifurcation, and the superficial and deep femoral vessels were filled with clot. In the fourth case a woman of thirty-seven had gangrene of the left foot from embolism of the femoral artery, which occurred nine days after abortion. The foot was amputated, and she recovered. He pointed out that in embolism the artery was not simply occluded as it might be by ligature, but, on the contrary, the embolus, by its lodgment at a bifurcation, occluded two vessels instead of one, and the clotting around it was more extensive than after tying. A second and most important factor in the causation of gangrene was the lodgment of secondary emboli in the vessels beyond the seat of primary obstruction. In all the cases recorded the heart was the seat of disease, and in most of them it was in a very advanced state of degeneration. These conditions must greatly interfere with the development of a collateral circulation, for not only were the diseased vessels little capable of enlarging to meet the altered requirements of the parts, but the fatty heart was unable to overcome the additional obstruction caused by the embolus, and failed to drive the blood stream along the narrower and more tortuous side channels. Mr. Bowlby next related two cases of gangrene caused by arterial thrombosis. A woman, aged fifty-six, was, whilst walking, suddenly seized with pain and numbness in the left leg, which became pulseless and cold. Post mortem there was found mitral and tricuspid disease; the aorta was atheromatous, and three inches above its bifurcation was filled with firm dark clot, which completely occluded its lumen, extending into the iliac, femoral, and popliteal vessels on both sides. The second case occurred in a woman of forty-eight, who was the subject of great constitutional feebleness, and presented on admission dry gangrene of the left hand and forearm. No pulse could be felt in any of the arteries of the upper extremity. The patient passed into a state of semi-coma and gradually sank and died. At the post-mortem the whole of the arteries of the upper extremity were found filled with clot; there was a complete absence of inflammatory thickening round the vessels, or sign of embolus. The first of these cases was interesting on account of the magnitude of the vessels implicated. In the second case he thought the clotting resulted from excessive slowing of the arterial stream owing to the weak heart, the thrombosis beginning in the smaller peripheral vessels and gradually extending upwards.

The following card specimens were exhibited:—

Mr. BOWLBY: Unusual form of Loose Body from Knee Joint.

Dr. LEDIARD: Enlarged Bursa Patellæ with Outgrowths from Walls.

Dr. N. DALTON: Gummata in Liver of an Infant.

Mr. TARGETT: Bony Tumour of Buttock.

Dr. PERCY KIDD: (1) Mitral Stenosis with Pulmonary Phthisis; (2) Tuberculosis of Bladder and Urethra.

Mr. CLUTTON: Symmetrical Loose Bodies from Knee Joints.

CLINICAL SOCIETY OF LONDON.

Acromegaly.—Acute Periosteal Swellings in Infancy (? Rickety).

AN ordinary meeting of this Society was held on the 13th inst., Dr. W. H. Dickinson, F.R.C.P., Vice-President, in the chair.

Mr. RICKMAN J. GODLEE read a case of Acromegaly. The patient, a lady, aged forty-one, had applied to him on account of a great enlargement of the thyroid body of about nine years' duration, in which a cyst formed which caused neuralgia by pressure on branches of the cervical plexus; this cyst Mr. Godlee opened and drained with relief of the symptoms. The patient, who had previously been of a slight figure and the possessor of a good voice, first noticed the disappearance of her high notes, then the swelling of the neck, and then the sudden stopping of the menses at the age of thirty-six. Since that time there had occurred a gradual increase of the thyroid, accompanied by enlargement of the bones of the face and limbs, and especially of the lower jaw and of the hands and feet. The patient came of a gouty and rheumatic family, and had been the subject of rheumatism before the illness developed itself, but not afterwards. The present state was then described. Bones: Lower jaw much enlarged, so that the teeth, which spread out, could not adapt themselves to those of the upper jaw; head lines little if at all affected, so that the face had the shape of an egg with the large end downwards, thus differing much from that of osteitis deformans; clavicle and ends of ribs massive, so that the sternum seemed sunk in a hollow; bones of limbs not generally thickened, but all the natural prominences much exaggerated, and the small bones of hands and feet much enlarged, so that the extremities had become broad and spade-like. Spine: Marked kyphosis suggesting caries, and causing considerable diminution of height. Cartilages of ears, and probably of nose and larynx, thick and stiff. Skin coarse, and with large sebaceous glands in face; natural elsewhere. Subcutaneous cellular tissue normal, but deficient in amount, owing to emaciation. Perspiration profuse, the skin having been previously not abnormally moist. Muscles much wasted. Senses: Hearing normal; smelling much impaired, especially for delicate smells; tasting also much impaired, especially for delicate flavours, the tongue being very thick and large; vision good; touch normal, the patient being still able to play the organ as well as ever. Voice harsh, metallic, and monotonous. Respiration: Some dyspnœa, partly due no doubt to the thyroid enlargement. General condition one of marked and increasing

weakness; she "shuffles about like an old woman." Appetite poor, but thirst excessive. Pulse rapid. Temperature normal. Urine contains no albumen or sugar. Intelligence perfect, and disposition placid. Mr. Godlee then referred to (1) the connexion between this remarkable condition of the bones and the abnormal state of the thyroid noted in most cases, comparing it with cases of serous malignant tumours of the thyroid, which have a tendency to recur in bones; (2) the relation between the abnormal state of the thyroid and the early stoppage of the catamenia, also apparently a common symptom of the disease; (3) on the resemblances and differences between acromegaly and osteitis deformans; (4) on the superficial resemblance but wide difference between acromegaly and myxœdema.

Dr. HADDEN and Mr. BALLANCE brought forward a case of Acromegaly. The observations had been published in the Clinical Society's Transactions three years previously (vol. xviii). Fifteen months later the attention of the authors was again drawn to the subject by a paragraph in THE LANCET, headed "Acromegaly," and under this head it was found that Marie had described a condition which tallied with the author's case (*Revue de Médecine*, April, 1886). The patient was a woman, aged thirty-seven, and the disease dated five years back, when she had rheumatic swelling of the knees, following probable scarlet fever. But previously to this she had suffered from tingling sensation in the hands, and the catamenia had ceased and never reappeared. The face became enlarged, the nose broadened from hypertrophy of the nasal cartilages, the cheek bones prominent, the lower jaw square, massive, and protruding, and the lower lip thick and everted. There was some fulness beneath the eyes, but no pallor or translucency, and no circumscribed redness over the cheeks. The cranium was not affected. The thyroid gland was distinctly atrophied. There was no indication of enlarged thymus, as shown by dulness over the manubrium. The clavicles were hypertrophied. The hand and feet were enlarged, but not deformed. The enlargement was general, but the subcutaneous fatty tissue was disproportionally thickened. The skin of the extremities, as elsewhere, was in every respect natural. Previously she used to wear No. 7 gloves; now the circumference of the hand was nine inches and a half. The feet were even more enlarged in proportion than the hands. At one time she wore large No. 4 boots; now she takes large No. 8's. There was no loss of muscular power, and the woman could use her hands as well as ever she did. The forearm and legs were not hypertrophied. The arm was natural. The speech was guttural, not slow. The tongue was hypertrophied. The viscera were natural, and there was no albumen in the urine. The arteries of the extremities were apparently natural. There was complete blindness of the right eye, due to optic nerve atrophy, probably following neuritis. Sensation was good; the muscular power unimpaired; the muscles not wasted; the intellectual processes good; and there was no excessive perspiration, no undue thirst, and no curving of the spine. The authors then gave an account of the literature of this affection, and among other cases quoted one by Dr. Wilks, mentioned in "Fagge's Medicine." It would appear that rheumatism is a possible cause, and in four cases at least the catamenia were suppressed at the onset of the disease. Both the sexes may be affected. The disease receives its name from the characteristic enlargement of the hands and feet, but the bones of the face become hypertrophied, as also the cartilages of the nose, ears, and eyelids. The long bones, unlike osteitis deformans, usually remain unaffected. Blindness has been noted in three or four cases, and the authors mentioned that this might depend on hypertrophy of the protruding body exerting pressure on the optic chiasma and tracts. Enlargement of this body has been found in two or three fatal cases. The thyroid gland also always seems to be abnormal. Attention was called to the chief points of difference between acromegaly and myxœdema and osteitis deformans. The differences in the shape of the face were very obvious. In addition there were many important features absolutely characteristic of acromegaly.—Dr. WILKS read notes of a case of the disease in a young woman aged twenty-eight. He saw her in February, 1869. She had been good-looking, but had become so hideous that the boys shouted after her in the streets. Her features became thickened and deformed, and the hands and feet large and ungainly. The malady had been coming on for six years, during which time there was amenorrhœa. She had lost the sight in both eyes. She was given arseniate of soda, which seemed to do good. In April, 1870, she went into the country, and was subsequently reported to have died comatose. His belief at the time was that she had a tumour of the brain, his diagnosis being based upon the persistent headache and optic neuritis. He was of opinion that the disease was quite distinct from any other, and the cases belonged to a class quite outside the ordinary pathology. They could understand the mechanism of lung disease or heart disease, but this disease was a form of perverted nutrition. Alluding to some remarks by Dr. Hilton Fagge as to the compensation which existed between the different functions and organs, he pointed out that now and again cases were observed in which particular tissues tended to grow beyond their proper proportion—bone, fat, &c., or glands. Sometimes the extremities began to sprout, for some reason best known to themselves. These were physiological conditions of nutrition, the why and the wherefore of which they were unable to explain. In a paper he had lately read in a German journal on the subject, he had been struck by the similarity of the symptoms in his own case. He mentioned that Charcot had given it a name indicative of his belief in its nervous origin. Some years since, when the pathology of Addison's disease was being investigated, Sir William Gull was working at the brain, and remarked on the wonderful resemblance which existed between the structure of the suprarenal capsule and that of the pineal gland. He suggested at the time that it would be curious to notice whether the pineal gland was also affected in Addison's disease, but the result of the inquiry was negative.—Mr. GODLEE, in reply, said that in three cases of acromegaly there was found, post mortem, some enlargement of the pituitary body. In one case it was as large as a walnut. Erb's paper collected eleven cases of the disease, which, with the two now reported, brought the number up to thirteen. They had occurred between the ages of fifteen and fifty. The cases recorded by him were very interesting. The first case was in a woman of fifty-eight. The disease came on at the menopause. This patient suffered from migraine, a not uncommon symptom in this disease. In her case the disease progressed for three years, and then remained stationary for six. The loss of vision in several cases seemed to have been due to opacity of the cornea. Friedreich had described two cases. With regard to the temperature, it was normal in his own case, except just subsequently to the removal of the thyroid body. The long bones were distinctly affected. In several cases the marked enlargement of the lower jaw was absent. In connexion with the nails, Erb had pointed out that in his cases they were much affected, as in other recorded cases.—Dr. HADDEN, in reply, mentioned that Dr. Ord had examined his patient, and had said distinctly that it was not a case of myxœdema, the disease with which it was most likely to be confounded.

Dr. SAMUEL WEST read a case of Acute Periosteal Swellings in several young infants of the same family, probably rickety in nature. A child, five weeks old, was brought by its mother, with the statement that its left arm had "dropped." A swelling, apparently periosteal, occupied the middle third of the shaft of the left humerus. It was exquisitely painful and tender. The movements of the arm were perfect, but the child kept the arm still on account of the pain which movement caused. Similar swellings were found on the right humerus and on the left femur. There were some slight bosses on the ribs, but no other signs of rickets, and the child was well developed and well nourished, and, except for the pain of the swellings, seemed in good health. The treatment consisted in the administration of some cod-liver oil and a little iodide of potassium, and the mother's milk was supplemented with cow's milk. In a fortnight the pain had almost gone, and the swellings were smaller. In the course of three months they were hardly to be made out, and they ultimately entirely disappeared, leaving the bones straight. The patient was the fifth child, born at the eighth month, and fed upon the breast only. The first swelling came on the ninth day, the second in the fourth week, and the last two days before it came under observation. Of the other children, the eldest was similarly affected at the age of a week. The child, now a lad of nine years of age, was seen, and showed no traces of the old bone affection. The second, a boy now seven, was never so affected. The third, a girl now five and a half, and also a fourth, a boy now three and a half years, were both affected, the former recovering completely, but the latter had considerable rickety deformity. There was no history of syphilis, or evidence of it in the family. The second case was seen in a child of the brother of the father of the previous children. It was a

female infant of three weeks old, and had developed a swelling of the left humerus a week before being seen. It was also suckled, and, as the mother was strong, no medicine was given and no treatment adopted except to keep the arm still by a loose bandage. In about a month the swelling had entirely disappeared. This patient was the fourth child. The first, a girl aged six, and the third, a girl of two, were, and had always been, well. The second, a boy of four, had had both arms and legs affected in the same way at the same age, but had got quite well. In this case also there was no evidence of syphilis. Dr. West believed that all these cases were rickety in nature, and closely allied to acute rickets, if not actually cases of that disease. From the cases of acute rickets recorded they differed in respect of age, this affection being rare in such young children; also in the fact that more than one member of the family was attacked; and lastly in the mortality. That these were cases of early rickets cannot, however, be doubted, on account of the evidence of rickets in the family, and of the absence of any other assignable cause. Of syphilis there was no other evidence, and green-stick fracture or injury must also be excluded. Dr. West likewise referred to another case seen by him, and recorded by Mr. Herbert Page, which was an undoubted case of acute rickets, and that seemed to him to differ from those here described only in degree. The element of scurvy had been supposed to enter into the causation of acute rickets, but that condition was certainly not existent in the present cases.—Dr. BARLOW said that he was not aware of any similar group having been recorded. The nearest case was that related by Dr. Ormerod, whose patient suffered from symptoms of osteomalacia, and transmitted his bone affection to two of his offspring. The symptoms, however, did not come on so early as in Dr. West's case. He had seen one of the cases, and could confirm what had been said of them by way of description. There was no evidence of congenital syphilis. He did not agree, however, with their interpretation. Dr. West had referred to a paper of his on what the Germans called "acute rickets." He showed the bone from one of these cases to demonstrate the difference between these cases and those of Dr. West. There was very great cachexia in acute rickets, with a curious sallow tint and a great proneness to hæmorrhages. Dr. West's case had not this cachexia. With reference to the local condition, there was a marked difference between the two sets of cases. He suggested that the lesions in Dr. West's case were lesions in bones in a subject of intra-uterine rickets. Although many of the cases described as intra-uterine rickets were simple malformations, he had satisfied himself, by the examination of a number of fœtuses, that the condition did actually exist in a certain proportion of infants. Assuming that to be the case, it was comparatively easy to understand how fractures might occur soon after birth. He suggested that the appearances were due to green-stick fractures, with effusion around the seat of fracture. A child was brought to him when ten weeks old. Some difficulty was experienced during labour in withdrawing the legs, though the presentation was a cranial one. The legs were markedly bent forward. Then the child had a swelling in the middle of the right humerus, exactly like that in Dr. West's case. Within a week there was another swelling in the left humerus. These slowly passed away, and now the only thing was a very slight angularity, quite consistent with there having been a green-stick fracture.—Dr. DICKINSON said he had seen a great many acute periosteal swellings, and quoted the case of a child with an acute periosteal swelling in the scapula, with very marked rickety symptoms. There was reason to suspect syphilis, but treatment with iodide of potassium did more harm than good. He was satisfied that, as a matter of fact, syphilis had nothing to do with it. He mentioned another case in which a similar condition existed in a cachectic infant four months old. The infant had swellings on both femurs, and was scorbutic. The food was inquired into, and it was found that the child had been fed on Nestlé's food and Swiss milk. The treatment simply consisted in substituting the fresh milk from the cow, and the child rapidly recovered. He could quote a number of similar cases.—Dr. GLOVER mentioned a very similar case which puzzled him very much for a time. The patient was a child a few years old, with painful swellings of the legs and slight hæmaturia. Syphilis being suspected, the iodide was given, with unsatisfactory result; but the child rapidly recovered with Parrish's food. Dr. Gee, who saw the case with him, was now of opinion that such cases are scorbutic, and require fresh milk and mashed potatoes.—Dr. WILBERFORCE SMITH pointed out that strumous periostitis almost always went on to suppuration, which this disease never did.—Dr. ORMEROD pointed out that these children were not children of the same mother, but merely cousins. He did not see how the theory could explain that except as a coincidence.—Mr. PARKER declined to regard the affection as either rickets or scurvy. He maintained that while scurvy could be induced with certainty by an appropriate diet, these cases were so rare as to be pathological curiosities. Were the view correct they would be extremely common. He pointed out that rickets very rarely occurred in the centre of the long bones, but was common in the first few days after birth, and then attacked the epiphyses. He looked to syphilis as affording the best interpretation of the condition, the manifestations being modified by some peculiar idiosyncrasy. He considered that the evidence in favour of syphilis was quite as good as for rickets or scurvy.—Dr. WEST, in reply, said that he adhered to his original opinion in the absence of any serious reason for altering it. He said he had failed to find the slightest bending of the bone in Dr. Barlow's case. He had only noticed cachexia in a case where there had been a good deal of hæmorrhage. He observed that Mr. Parker begged the question. If the swellings were to be accepted as proof of syphilis, there was an end of the matter; but there were no other signs of its existence, though they had been carefully looked for. With reference to the parentage of the children, he mentioned that none of the brothers were strong, and one was actually suffering from some strumous affection of the ankle joint.

The following living specimens were shown:—

Dr. BARLOW: A case of (Partly) Congenital Rickets.

Mr. MURPHY: An Infant recovering from Bromide Rash, the bromide having been taken by the mother.

Dr. HADDEN and Mr. BALLANCE: Case of Acromegaly.

MEDICAL SOCIETY OF LONDON.

Cerebral Abscess.—Cardiac Valvular Lesions.

AN ordinary meeting of this Society was held on April 16th. Mr. Edmund Owen, F.R.C.S., Vice-President, in the chair.

Mr. DAMAR HARRISSON (Liverpool) read a paper on a case of Cerebral Abscess treated by Operation. It was of traumatic origin, the injury having been received eleven years before urgent, and ten years before even slight, symptoms appeared. The patient, a boy, aged fifteen, was admitted into the Liverpool Northern Hospital on Dec. 22nd, 1887, with partial right hemiplegia and severe cephalic pain. Eight days before admission he received a blow upon the right side of the head which another boy accidentally inflicted with a pair of tongs; three days afterwards he was suddenly attacked with convulsions on the right side of the body. These appeared first in the arm and then spread to the face and leg. When they had ceased the patient found that he had lost power on the right side, especially the arm. During the succeeding four days he had eight similar attacks, accompanied by giddiness and pain in the head, but not by loss of consciousness. The headache had increased in severity, and the paralysis was likewise more marked, especially in the face and leg. Vomiting had occurred two or three times. On admission, there was marked paralysis of the right side of the face and neck, the right arm and leg. In the arm the extensors of the wrist were principally affected, the biceps next, and the deltoid only slightly. In the leg, the quadriceps extensor and the long extensors of the toes were the muscles chiefly paralysed. The severe pain over the top of the head was not referred to one side more than another, and the intellect was dull. The tongue was protruded towards the right side. There was impairment of vision in the right eye, but sensation over the surface of the body was quite normal. On the right side the abdominal reflex was diminished, the plantar markedly so; the knee jerk was much exaggerated, and there was no ankle clonus. There were signs of some consolidation at the apex of the right lung. Soon after admission all the paralysed muscles were convulsed for about five minutes. Upon examination of the head no spot tender to pressure or percussion could be definitely discovered, but a cicatrix

was observed on the left side, covering a somewhat uneven surface of bone, and a further inquiry from the patient's friends elicited the fact that eleven years before he had received a severe blow on the left side of the head, causing a wound, from which bone was removed; this injury was followed by no severe symptoms. During the last twelve months twitchings in the right arm had been observed, which were confined to the flexors of the wrist, the biceps, and the deltoid; there had been no fits, except those already mentioned. From these facts Mr. Harrisson came to the conclusion that there was probably an abscess of the brain situated in the motor region of the cortex, and an operation was determined on. The old cicatrix, in marking by Thane's method, was found to correspond in position to the upper part of the left ascending frontal convolution; the centre of the cicatrix was therefore chosen as the site of operation, and on Dec. 23rd an inch disc of bone was removed, the centre of the trephine hole being three-quarters of an inch in front of the fissure of Rolando. The bone removed was adherent to the dura mater, and of very unequal thickness, a ridge occupying its centre, which had pressed upon the brain. The remainder of this ridge was cut away with a chisel; that source of irritation being removed, and there being no bulging of dura mater, he decided to postpone further operative procedure, keeping the wound open so as to be able to explore if necessary. Next day the headache was absent, the plantar and patellar tendon reflexes had become normal, the pulse was 60, the temperature normal, and the patient more intelligent. But during the following three days the lad became apathetic and restless, there was tonic flexion of the right lower limb, the temperature fell to 97·2°, the pulse to 45, and paralysis became absolute. A further exploration was therefore made; the brain was punctured to a vertical depth of one inch and a quarter by a tenotomy knife, and the puncture prolonged into an incision, through which nearly half an ounce of fetid pus drained rapidly away as if under the influence of considerable pressure. The abscess cavity was syringed out with corrosive sublimate lotion and a horsehair drain inserted. On the third day after this operation the horsehair was replaced by an indiarubber drainage tube; on the fifth, power had begun to return to the right leg; on the seventh, movement was noticed in the right arm; and on the ninth, drowsiness disappeared. A hernia cerebri developed, and it was noticed that on relieving this protrusion from the pressure of the dressing the pulse rose from 60 to 84, falling again to 60 after two hours of reapplied pressure. The patient made an uninterrupted progress towards recovery; the hernia entirely subsided; the temperature was generally subnormal, only once reaching 100° F.; the patient got up and walked on the thirty-third day after the evacuation of the abscess, and a fortnight after this the drainage tube was finally removed. At the present time the patient was perfectly well, the only difference when comparing opposite sides of the body being found in the grip of the hands, the right being twenty-seven, the left twenty-eight and a half kilogrammes. The optic discs were normal. The duration of the latent period (eleven years) formed an interesting feature in this case; the symptoms of localised disease during that period, as shown by the twitchings of the right arm, and afterwards by the convulsions beginning in the arm before spreading to the face and leg, clearly pointed to the arm centre as the focal area of the abscess. The order in which recovery took place also supported that view: firstly, the face and tongue; secondly, the neck; thirdly, the leg; and, lastly, the arm. The localisation was much facilitated by the presence of a cicatrix indicating the point of original injury; but in the absence of this, the extensive nature of the paralysis which implicated so rapidly the face, tongue, and neck (the centre for the latter in monkeys being the first and second frontal convolutions), would have led to the choice of the ascending frontal rather than the ascending parietal convolution as the seat of disease. In diagnosing abscess rather than tumour, the facts chiefly taken into consideration were the original injury, the prolonged latency, afterwards followed by acute symptoms aroused by a recent blow, the symptoms bearing the character of a rapidly increasing focus exerting great pressure on adjoining parts. The operations and after-treatment of the wound were conducted with the most careful antiseptic precautions. He regretted the absence of an ophthalmoscopic examination on admission, and remarked that the use of horsehair as a drain was a complete failure.—Mr. OWEN remarked on the difficulty of examining these cases ophthalmoscopically.—Mr. BARKER said that of two cases under his care one had no optic neuritis, whilst in the other it was well marked. He advocated the application of pressure over the wound so as to prevent the escape of pus into the arachnoid.—Dr. BERVOR regarded the case as another proof of the accuracy of Ferrier's centres; he asked if there were any aura, and said that abscess, being produced rapidly, often had no optic neuritis; whilst with slowly growing tumour, giving rise to pressure and pain, optic neuritis was usually present.—Dr. ANGEL MONEY said that with brain lesions the deep reflexes were usually increased, and the superficial diminished.—Dr. MACLAGAN remarked on the absence of febrility.—Mr. JESSOP regarded the neuritis in these cases as a true inflammation, and not a pressure symptom.—Mr. HARRISSON, in reply, said there was no aura.

Dr. MILNER FOTHERGILL then read a paper on Small and Moderate Valvular Lesions of the Heart. He said that in the consideration of valvular disease little or no attention had been paid to the discrimination of large and small injuries. All were grouped together, and the prognosis of the gravest forms was given to trivial injuries, which really produced little or no injurious effect upon the organism. In order to grasp the subject intelligently, regard must be had to the facts of comparative anatomy and embryology. The primitive form of heart was a mere pulsatile muscular sac. It was not till the Ganoid fishes were reached that imperfect pouch-valves were developed in the bulbus arteriosus. So in the fœtus—the record of evolution. At first the human heart had no valves; then imperfect valves appeared, and as the embryo waxed and developed, these valves became more and more perfect and complete. A primary valvular injury was the undoing of evolution, a degradation of the heart, precisely to the extent of the lesion or mutilation. And there was all the difference in the world as to prognosis betwixt a small lesion well compensated and a large one not admitting of effective compensation. And how did Dame Nature go about to compensate a valvular injury? By falling back upon the primitive heart—the muscular sac. In evolution, valves economised muscular force; so, in dissolution, an injury to the valvular mechanism of the higher heart was compensated by overgrowth or hypertrophy of the primitive muscular sac—the lower form of heart,—for which the term "compensatory hypertrophy" was in use. When we detected a valvular injury, we knew that we could do nothing to repair it; that was quite beyond our powers. Our hopes were centred on the early lower form of heart. By rest—physiological rest,—by good food, hæmatics, and cardiac tonics, we did our best to aid Nature's attempt to meet the injury by developing the primitive heart—the muscular wall. With a small lesion such muscular compensation was readily attained, and was well maintained for many years. When the injury was a large one, then the compensation was incomplete and wore out in a comparatively short time. Consequently, it was a matter of the highest moment to measure the mutilation and extent of the injury, in order to calculate the patient's prospects and forecast the future. A murmur would reveal the existence of a valvular injury; but it was inarticulate as to its magnitude. For that we must examine the case physiologically, especially in cases of mitral injury. To do this, we observed the effect of effort. With a small lesion the patient could run, but not very far. With a moderate lesion he could walk on the flat, but he could not run or climb hills. With a large injury all effort was distressing. We gauged the injury by its effect upon the respiration, not by the characters of the murmur. In strict proportion to the extent of the valve lesion and the quality of the compensation was the heart degraded, the organism crippled and life shortened. Small and moderate primary valve lesions did not carry with them the gravity which undoubtedly attached to an extensive valve injury. There was, too, a mighty difference prognostically (and in every other way) betwixt a case where the changes in the muscular wall—the lower heart—were subsequent to a valve injury, and one where these muscular changes preceded it, as in the large heart of vaso-renal change.—Dr. ANGEL MONEY compared the subcutaneous nodules often found in rheumatism with the basis of the nodules formed on the valves.—Dr. SANSOM referred to difficulty in forming a prognosis of valvular disease. In a young child compensation was readily effected, but the danger of the repetition of a rheumatic endocarditis rendered a forecast difficult. Loud murmurs might entirely disappear.—Dr. HARE quoted cases showing that valve diseases should not be measured by the murmur, but by the coincident circumstances.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.

Cold as a Cause of Disease.

A SPECIAL meeting of the Society was held on March 23rd for the discussion upon Dr. Ransom's address on the above subject, an abstract of which is published on another page.

Mr. BURNIE said that the purpose and tendency of the paper, if he rightly understood them, were not so much to prove that cold was not a cause of disease as to show that its importance in this respect had been greatly overrated, and to indicate the methods by which the injurious effects of cold might be reduced to a minimum. To this extent he was completely in accord with Dr. Ransom, and thought it would be difficult to overestimate the value and importance of the practical suggestions given in the paper. He (Dr. Burnie) did not think that, except in a very few instances, cold alone was the cause of an illness. It acted rather as a predisposing cause, and by depressing vital force favoured the action of other causes of disease. Possibly the apparent difference between Dr. Ransom's views and his own was due to the different meanings they attached to the word cause. Dr. Ransom would apparently confine the use of this term to the actual or "specific disease exciter," while he (the speaker), believing that every attack of illness was the product of many factors, some near and others remote, thought that each of those factors might properly be called a cause of disease.

Dr. BROOKHOUSE took exception to the commonly received views concerning cold as a cause of disease requiring more "solid foundations" than were accepted in the vast majority of diseases, observing further that, whether from the etiological or clinical side, diseases were wrapped in doubt and disputation. That certain forms of disease, notably those of the respiratory organs, were more prevalent and more fatal in the cold seasons seemed an indisputable fact, and it would be difficult to dissociate the two things as cause and effect. The speaker's experience was opposed to that of the President when he said that instances of prompt illness after the application of severe cold are relatively very few, and at all events it must not be said that they are not *therefore* of great value. In discussing croupous pneumonia, Dr. Ransom quoted the opinion of Jürgensen: "The assumption of a specific disease excitor is necessary." But why assume? Is not to do this the very contradiction of exact inquiry? Neither is it to be admitted, "because some forms of croupous pneumonia are infective, and not always clinically distinguishable from sporadic cases," that it seems "*certain* that these forms should be separated from the chill diseases," and an argument thus founded "against retaining the remainder in that category." Dr. Brookhouse was unable to assent to such a postulate as that. With regard to the objections to the doctrine of the causation of disease by cold, and the statement that it conflicts with our notions of the pathogeny of inflammations, the arguments and illustrations adduced did not appear satisfactory or conclusive. It might be admitted, perhaps, that we "conceive of inflammation as the reaction of a living tissue to an injurious irritation," but here the concession ended, for it by no means followed, for "the rule to be constant, that when the irritant is a simple, mechanical, or physical one, the resulting inflammation is in direct proportion to the irritation, and limited nearly in extent to the area irritated." He would illustrate his meaning by saying a person receives the impact of cold air upon a given surface of the body; he is immediately conscious of a chill, and the symptoms of catarrh show themselves either locally or remote from the seat of injury within twenty-four hours. There has been a sensory and vaso-motor disturbance locally if the ganglia were unstable and susceptible, or remote until such ganglia were discovered. Then follow the pathological changes in order. This theory of local and remote injurious effects was in harmony with anatomical fact, physiological laws, and clinical experience. For further information upon the results of vaso-motor disturbances, especially in connexion with the inferior cervical ganglion, he would refer to a paper read before the International Congress in London in 1881 by Dr. Edward Woakes, as well as to some recorded cases by Dr. Weir-Mitchell. We need not, then, go to the "triumphs of modern surgery" for an explanation of pathological changes in medicine. Whilst, therefore, expressing the pleasure and interest felt in the President's address, Dr. Brookhouse thought that much greater observation and experience were needed before the old views respecting cold as a cause of disease could be superseded.

Dr. HANDFORD suggested that the earlier part of the address tended to prove too much, and would warrant a much stronger conclusion than the one Dr. Ransom had actually drawn, and with which he (Dr. Handford) was entirely in accord. He thought that the difficulty of estimating the influence of cold as a cause of disease arose partly from the impossibility under natural conditions of entirely separating cold from moisture and wind—i.e., that the effects of a given low temperature varied with the degree of conduction and convection; and partly from the great differences in human beings, depending on habit, race, temperament, pigmentation, &c. The conditions being so variable, different observers, if they ventured to generalise, drew the most opposite conclusions as to the effect of cold. Dr. Handford suggested that though the thermometer indicated a fairly constant temperature in health, the specific heat of individuals would be found to vary if it could be satisfactory estimated with the calorimeter, and that this would in part explain the varying effects of cold in different individuals. The fact that a certain degree of cold was incompatible with life, both local (e.g., frost bite) and general; that a less degree rendered the vitality inactive; that the forms of life, both animal and vegetable, diminished as the regions became colder; that the death-rate invariably rose during cold weather as the thermometer fell: all these tended to show that cold was prejudicial to life; and this, since disease has been defined as "life under unfavourable circumstances," was almost tantamount to saying cold was a cause of disease. It was agreed on both sides that cold could cause catarrhal inflammations of the skin and mucous membranes. No doubt it was often wrongly charged with causing specific diseases. But it was not improbable that by diminishing the superficial circulation and congesting the deeper part of the body it might cause diseases depending on disorders of circulation, and that in addition to this, by lowering the vitality and therefore the resisting power of the tissues, it might enable some of the specific diseases depending on micro-organisms to make a start where they would otherwise fail.

Dr. WHITELEGGE thought Dr. Ransom had made it clear that the influence of cold in causing disease had been greatly exaggerated, and that practical harm had resulted from undue fear of "chills." Its convenient omnipresence had led to its being held accountable for a number of diseases with which it had little to do; but there was satisfactory evidence that certain diseases, or at all events pathological conditions, were traceable directly to cold; and in others cold was so constant an antecedent as to leave no doubt of the existence of some causal relation. Bell's paralysis was an instance of a local effect of exposure to cold, and in susceptible persons certain forms of neuralgia were readily excited by east winds. He did not think that the wide difference between the diseases attributed to this agency, or the uncertainty of their appearance after exposure to it, were in themselves conclusive arguments against the reality of a causal relation. Scarlet fever, for example, occasionally led to nephritis or otitis, or other complications, some of them rare, the occurrence of which could not be predicted in any given case; but their dependence upon scarlet fever was undoubted. He asked if Dr. Ransom suggested that there was a present physical difference between (say) bronchitis due to measles and bronchitis due to other causes recognisable in itself, apart from knowledge of its etiology.

Mr. HATHERLY agreed with the views expressed by Dr. Ransom. He thought that cold could not be isolated from other factors in the causation of disease, and that its importance had been too generally over-estimated. He regretted that time would not permit a more exhaustive discussion of the paper.

Mr. T. W. KELLY insisted on the comparative intensity of cold. After reviewing the physiological effects of cold upon the body, he considered that either of these effects was sufficient to awaken a dormant predisposition. Considering cold as an etiological factor, he thought that by avoiding exposure to cold it was possible with some measure of certainty to prevent certain diseases.

Dr. RANSOM, in reply, said that the discussion had justified the fears he had expressed that his case had not been very clearly put; that this admission would meet several of the difficulties raised by Dr. Brookhouse. For most of the speakers he thought difficulties had arisen out of the diverse meanings of the word "cause," which he had used

to signify that external agent which initiated the morbid process. The expression "subject of its action" he had employed to indicate the average healthy person; and by the expression "the conditions of its action" he had indicated all those other circumstances which in any way influenced the result. For example, certain insanitary conditions favour the production and spread of enteric fever, but are not the cause. He had intentionally avoided leading the etiological question by pursuing the further steps of the process, which is a pathological one. Limiting his attention therefore to the first step of the morbid process, he could not find the proofs that in ordinary life cold was so grave a cause of disease as most of the speakers thought. There was much room for divergence of view as to how far it was a condition favourable to the production of certain diseases, and on this point only statistics could decide. His appeal to them had failed to satisfy him. It had been urged by Dr. Handford and other speakers that cold could not be isolated from other agencies with which it was said to co-operate. He had said the same thing in other words, and pointed out that this made a part of the weakness of the doctrine, seeing that no one could tell which co-operating agent was essential. He had excluded diseased and hyper-sensitive persons from consideration when speaking of cases of unstable equilibrium. He had refrained from discussing the various theories framed to explain the production of distant visceral inflammations by cooling the skin; and, as he was still of opinion that for average people the facts do not conform to the theories or require them, he would not reply to the various comments which had been made in that direction. He could not accept the view apparently held by Dr. Handford, that catarrh has a necessary association with cold, or that facial paralysis is constantly related to it, as Dr. Whitelegge seemed to imply. In reply to Dr. Whitelegge, he said that he conceived of etiological species of catarrhal inflammation of the mucous membranes and other tissues and organs just as he did of similar affections of the skin.

Reviews and Notices of Books.

A Manual of Treatment by Massage and Methodical Muscle Exercise. By JOSEPH SCHREIBER, M.D. Translated by WALTER MENDELSON, M.D. Pp. 285. Edinburgh: Young J. Pentland. 1887.

THE scope of this book is considerably wider than might be at first imagined on seeing the name on the cover. It is not confined to "treatment by massage." The author himself in his first lines refers to the "mechanical treatment of disease," and it is from this point of view that the book must be judged. Widening the term still further to include "medical gymnastics," the author traces their employment back to the oldest literary records of the Hindoos and Chinese. After mentioning briefly the equivalent among the Greeks and Romans, he traces further development in the eighteenth century under Francis Fuller in England, Clement Tissot in France, and Ling in Sweden. Admitting the value of their work, and more particularly doing justice to the mechanical manipulations of Ling and his pupils, Dr. Schreiber considers that the treatise of von Mosengeil in 1876 was the cause of mechano-therapy emerging from the "obscure mists of empiricism into the sunny fields of scientific research." And yet he regrets that the very term "massage" is in bad odour, and associated in the public mind with a suspicion of quackery.

From personal experience he arrives at conclusions with which it is rather hard to agree—viz., (1) every physician may acquire, *self-taught*, and successfully employ the methods of mechano-therapy in the treatment of disease; (2) laymen, by instruction and by observing others, may be trained to perform all the various manipulations. It is more satisfactory to pass on to his remarks upon the physiological effects of mechanical interferences. These he divides into primary and secondary effects: the former including the removal of lymph, exudations, &c., and the solution and removal of adhesions; the latter concerned more particularly with the alterations in the general nutrition due to an increased circulation.

The description of the mechanical interferences used is lucid, and not overweighted with needless terminology. Diagrams here assist the text very agreeably. Dr. Schreiber is, however, not in accord with ordinary practice in advising that mechanical manipulations should be exercised solely upon the clothed body. As a necessary result of this rule he is averse to oiling the parts to be treated. Considerably more than half the book is devoted to a consideration of the diseases suited to the application of mechano-therapy, and it is in this portion that the breadth of the term can be best realised. Very much of the treatment advocated consists in active gymnastic movements performed by the patient, under direction, with or without some simple form of apparatus. It is only occasionally that mention is made of pressing, kneading, and hacking. This portion of the book is profusely illustrated, and due relief is given by the introduction of notes of numerous interesting cases.

In conclusion, it may be said that, although disappointing as a work on the treatment by massage, the book is a very satisfactory exposition of the treatment by methodical muscle exercise. It has been fluently translated into idiomatic English, which shows few traces of its German origin. The following quotation sufficiently indicates this: the author is made to speak of eccentricities "which simply deserve the silent disregard of the scientific world."

A Treatise on Chemistry. By Sir H. E. ROSCOE, F.R.S., and C. SCHORLEMMER, F.R.S. Vol. III.: The Chemistry of the Hydrocarbons and their Derivatives, or Organic Chemistry: Part 4. London: Macmillan and Co. 1888.

THIS is the seventh volume of the great work with which, during the last ten years, all chemists have become familiar. It is entirely occupied by the aromatic compounds containing seven and eight atoms of carbon, so that a great deal has still to be done before the treatise will be complete. The inherent difficulty in regard to all such works is of course that science advances with such rapid strides that no author can keep pace with it; but in the present case that difficulty has to a great extent been obviated by the care which has been taken to confine each volume, or pair of volumes, to a definite branch of the whole subject. Thus one volume is devoted to the non-metals, two to the metals, two to the open chain or paraffinic series, one to benzene and its derivatives, and the last to a clear and compact account of the toluene and xylene groups. The book shows no signs of falling off in respect either of care or lucidity. We find in the last volume the same simplicity of arrangement and description, and the same attention to scientific history and bibliography, as in the first. As an example of peculiar interest to our readers, we may refer to the history and detailed description of hippuric acid (pp. 181–193). It is a model of compilation, and every few lines contain a reference to some original authority.

Lessons on Prescriptions and the Art of Prescribing. By W. HANDSEL GRIFFITHS, Ph.D., L.R.C.P.E. New Edition, adapted to the British Pharmacopœia of 1885. Macmillan and Co. 1888.

THIS useful little book has, we learn from a note signed by "The Publishers," been revised and adapted to the British Pharmacopœia of 1885, but by whom the work has been performed we are left wholly in doubt, and we also seek vainly for the reason of delay in issuing the present edition two years and a half after the British Pharmacopœia. The scope of the book is sufficiently indicated by its title. It is divided into lessons dealing with the grammatical construction of a prescription, the parts of a prescription, signs and symbols, words and phrases most frequently employed, and their abbreviations and contractions. Then follow

some considerations on the principles of medicinal combination, on incompatibility, posology, varieties of magistral formulæ, concluding with a lengthy series of examples and exercises. It will be seen that the book travels along well-beaten tracks, affording few opportunities for originality of treatment. With regard to abbreviations, it may be pointed out that the plan adopted might occasionally lead to some confusion if the student follows the example given him on pp. 46 and 47, where P. Scammonii Composita and P. Scammonii Compositus respectively indicate pill and powder. In the examples and exercises, which occupy nearly two-thirds of the book, an attempt has been made to classify them according to their intended action. This portion appears to be specially valuable, the prescriptions being given at full length, with the directions in Latin. It may be questioned whether the two "cogent reasons" given by the author for the employment of Latin still hold good: "A prescription in Latin can be deciphered in almost every quarter of the globe; and, secondly, it is often necessary to conceal from our patient that he is taking a certain drug." Still, as a guide to the art of prescription writing which may prevent the "unfriendly criticism of an apothecary's apprentice," and as a useful handbook for examinations requiring prescriptions in Latin, this little work would appear to fulfil the objects of its publication.

The Forms of Nasal Obstruction in relation to Throat and Ear Disease. By GREVILLE MACDONALD, M.D. London: Alexander P. Watt.

THESE lectures exhibit a considerable command of a complex subject. Where many specialists have in their writings made confusion worse confounded, Dr. MacDonald has attempted, and we think with success, to make matters plain. His classifications are good and his explanations lucid, while his deductions from clinical observations are in most cases underlaid by an accurate substratum of pathological reasoning. The literary style of his lectures suffers from his failing to readjust constructions applicable to the lecture theatre, but unsuitable for the pages of a manual. The formulæ at the end of the book are too scanty to be of real use, and the frequent references to the Throat Hospital Pharmacopœia are tantalising, since that valuable manual is not always at one's elbow. An appendix of the preparations referred to would be a boon to the general practitioner, and would enhance the value of the book. Dr. MacDonald appears to belong to the many who regard the evidence as unsatisfactory for believing in necrosing ethmoiditis. The anatomical explanations of the nose and the post-nasal region are remarkably good, and the same may be said of the therapeutic portions of the book. Dealing with a matter with which the general practitioner is but little acquainted, Dr. MacDonald has supplied materials for accurate diagnosis and prompt and effectual treatment, and in such a way as to be within the grasp of those who have no special training in the kind of work treated of in the book.

ROYAL MEDICAL BENEVOLENT COLLEGE.

THE twenty-fourth biennial festival of this institution was held on Tuesday at the Hôtel Métropole, the Lord Mayor presiding. Among the guests were his Royal Highness the Duke of Cambridge, the Earl of Dartmouth, Sir Trevor Lawrence, M.P., Sir A. Clark, Sir T. Crawford, Sir E. Saunders, Sir E. Sieveking, Sir A. Watson, Dr. Holman, and other prominent members of the profession, as well as the Sheriffs of London and Middlesex.

The Duke of Cambridge, in responding for "The Army, Navy, and Reserves," remarked that he was glad to be able to say that the services were as efficient as they could be, but that was not intended to imply that they were as efficient as they ought to be. For a powerful and influential nation like ours the services ought to have the means to secure still greater efficiency. The present times were marked by difficulties and anxieties, and it was impossible to forsee from day to day—he might almost say from hour to hour—what might happen. It was not a time to shut our eyes to our own shortcomings, but rather to keep abreast with progress and to advance with the times. Neither the military nor the medical professions should allow their interests to be dealt with on the basis of party spirit. They were the common interest of all, and he was very glad to be present on that occasion to support so useful an institution as the Royal Medical Benevolent College. Without the aid of the medical profession the army could not exist, not only in times of war but also in times of peace, because they looked to the medical staff to keep the men in fighting condition. It was his most earnest endeavour, as it was his bounden duty, to secure cordial relations between the various branches of the service, because it was only in that way that the general efficiency of the army was promoted and the safety of the country secured.

The Earl of Dartmouth responded for the House of Lords, and Sir Trevor Lawrence, M.P., for the House of Commons.

The Lord Mayor, in proposing the toast of the evening, said he feared the laity in general knew too little of the struggles and difficulties of medical practitioners, but he could assure them that the work of the Medical Benevolent College was most urgently needed, and most efficiently conducted. In behalf of the widows and orphans of the medical profession, he earnestly asked for liberal support.

Dr. Holman having responded to the toast, a list of subscriptions and donations, amounting to £2570, was announced by the secretary, and the proceedings shortly after terminated.

New Inventions.

ALLEN'S PATENT HOT-WATER AND ICE BOTTLES.

THESE bottles are of various shapes, to allow of convenient application to chest, abdomen, head, or knee. They are certainly very superior specimens of tin ware, and are made in two pieces instead of the usual four, thus

minimising the danger of leakage, whilst the seams are well rounded and finished. The vessels are all supplied with loops, so that they may be suspended by tapes from the bed cradle. These bottles must prove of value in the sick room.

THE LANCET.

LONDON: SATURDAY, APRIL 21, 1888.

THE Minutes of the quarterly meeting of the Council of the Royal College of Surgeons, held on April 12th, 1888, will naturally be scanned by Fellows and Members, with a view to present information and a hope of seeing some mark of future improvement in the conduct of collegiate affairs. The election of the Morton Lecturer, the award of the Jacksonian Prize, and the admission of two Members to the twenty-years'-standing Fellowship, are items of information which will, doubtless, meet with the approval of the general body of the profession. The reference of the subject of granting of degrees in Medicine and Surgery to a Royal Commission will be generally accepted as the best solution of a pressing yet wide-reaching difficulty. In the two reports—(1) on the delivery of lectures at the College, and (2) on the form of Report of the Council to the annual meeting of Fellows and Members, respectively—dated April 3rd and 11th we had hoped to witness some sign of future improvement in the conduct of collegiate affairs; but "*as you were*" is the order of the day, and reformers must chafe yet a little longer. The Report on the delivery of the College lectures pleads for a further trial of the present system of giving lectures in the College, and states that it "*has been to some extent successful.*" When matters are at their worst they begin to mend. In the opinion of many persons, the proper way to popularise collegiate lectures is to awaken an interest in the College herself; her danger lies in the apathy of her alienated constituents. A distinguished surgeon delivering (as of late) in the College theatre a lecture on a subject which he has made peculiarly his own, to an audience of ten persons, is not an edifying spectacle. In this case the fault was certainly not the lecturer's. Let us hope that the suggested plan of delivering the lecture at 5 P.M. instead of 4 P.M. may do something towards filling the rows of empty benches. The Report of the Committee on the form of the Report of the Council to the annual meeting of the Fellows and Members of the College, which was read, approved, and adopted, faithfully represents the Council of the College in its favourite *rôle*. Improvement is to be effected by the simple expedient of shuffling the cards, the pack remaining the same. The Report, in its present crude form of an abridged copy of the Minutes, will be *presented*. The Fellows and Members of the Royal College of Surgeons will have further opportunity of exhibiting their legislative impotence and political weakness by an unavailing protest against the actions of a governing body alike indifferent and irresponsible. Seriously, it is lamentable that a body of gentlemen, who are in other respects fitting representatives of British surgery (as the members of the Council of the College of Surgeons undoubtedly are), should manifest such an inaptitude for political ideas by continuing to exclude the *Members* of its corporation from any real share in its management, and by perpetuating the anomaly of denying the right and privileges of *Membership* to the great majority of the body politic and corporate. The membership of all other learned societies carries with it well-known privileges—such as the right of voting at annual and other general meetings, this vote exercising a direct and specific power over the executive. The Council of the College of Surgeons, after the application of their own intellectual and other tests, solemnly certify to the Member's skill and attainment; but it would seem that his capacity is for matters *outside* his own College, and not *inside*.

It is well that members of our profession, though ignored by the Council of their own College, and bereft of its sympathy, do win public confidence and esteem in the wider sphere of daily duty, and that many of the rising members are thus strengthening the argument in favour of their just enfranchisement.

CASUISTS of all epochs have delighted to discuss the question whether it is always and under all circumstances incumbent upon us to speak the whole truth, the majority of moralists leaning to the view that a rigid adherence to literal accuracy of speech cannot invariably be demanded without serious danger of thereby creating a worse evil than that which it is thus sought to avoid. No case is more pertinent to this issue than that of the physician, who is often at a loss how far to impart to a patient or his friends the precise import and future probabilities of disease as they appear to his mind. It is easy for those who are destitute of actual experience to enlarge upon the virtue of candour and the advantages of knowing the precise truth; but practical men know that the question is beset with very real and formidable difficulties, and that it is not to be decided offhand by any obvious enunciation of moral platitudes. So strong are the reasons for desiring a generally hopeful spirit on the part of medical practitioners that a distinguished consultant of a past generation is said to have once avowed the opinion that a very bad prognosis should *never* be given—a dictum which cannot be conscientiously approved, but is worthy of note as showing how much a great mind was impressed with the motives which impel us to avoid doing aught by word or act to quench the last ray of hope or discourage the last effort put forth for the relief of the dying. On the other hand, we cannot help recognising the justness of the rebuke when the novelist or satirist depicts the medical attendant leaving the sick bed with cheery words, easily interpreted (by the patient at least) as indicative of a strong hope of recovery, and no sooner closing the door of the sick room than bluntly avowing that death is imminent. Such conduct, although no doubt often based on humanitarian principles and real kindness of heart, does much to lower the moral status of the profession, and is on every ground to be strongly deprecated. We propose to glance at a few of the difficulties of this nature which constantly arise in practice.

Cases like the following are of daily occurrence:—A patient who has been ailing for some time, but who has no suspicion of grave impending mischief, presents himself for examination, and is found to be suffering from cancer or advanced phthisis. No one who knows anything of human nature will advise that in such cases the physician should bluntly

declare the whole truth with all its terrible significance. A patient resents such action as downright cruelty, and the mere shock may do serious mischief. Yet the medical authority, if, as often happens, he is closely pressed for a precise opinion, feels that the obligation of truth and his own professional repute alike require that the real state of the case should not be entirely concealed. Probably the best means of escape out of this often painful difficulty is to select some trustworthy friend of the sufferer, and to tell him how the case really stands, leaving him to make the true facts gradually known to the patient as the opportunity may arise of doing so with gentleness and consideration. In such cases the mere silence and grave looks of the physician serve to hint the truth, which would certainly be more painful if brusquely avowed.

Another case, equally common, is where, in the course of serious illness, the time arrives when hope of recovery must be abandoned, and death becomes only a question of time. Is the truth to be plainly avowed to the sufferer or not? Here, again, the aid of the patient's friends may often be judiciously invoked, few patients being able to receive without grievous shock and some sense of wrong a sentence of death from the physician's own lips. Some practitioners have the happy faculty of making the truth gradually known by the mere tone of the voice or some indefinable change of manner, without ever saying a word to shock or grieve. The response to a patient's questioning word or look may often be made clear enough without a syllable being uttered. Of course, where serious interests are affected by death, and much remains to be done during the remaining hours of life, the obligation of candour is proportionately increased. In such cases the physician's duty is clear, and must be discharged, however painful the effort of doing so may be.

In cases of incurable disease, where alternations of condition occur, the physician may feel at a loss how to comport himself in view of a decided, but obviously temporary, rally. In advanced phthisis, for example, up to almost the very end of life, surprising rallies sometimes occur, and naturally elate the patient, especially if there be a strong clinging to life. Is the physician to express gratification, or to hint plainly that such amendments are temporary and delusive? In such cases much will depend upon the attitude previously adopted. If the patient has been gradually instructed that recovery is beyond hope, but that rallies may occur, there is no objection to the physician recognising the occurrence of such a rally, and expressing a hope that it may endure for some time. But if the patient regards a rally as a prelude to probable recovery, we are certainly not justified in helping him to cherish a delusion.

We have dealt hitherto with the attitude of the physician in view of states of disease where the issue is clear. As regards the numerous cases where absolute certainty of prognosis is unattainable, we think we speak the general mind of the profession when we advise hopefulness. The most desperate case of typhus fever or pneumonia may rally at the last moment, and, while recognising in such instances the gravity of the peril, we should be slow to relax our efforts, or to speak as if recovery were impossible. If such an attitude were generally adopted, we should cease to encounter people who make a life-long boast of having recovered from serious illness after they had been "given up by the doctors."

IN an article last week we pointed out the necessity for the amendment of the Local Government Bill, so that medical officers of health should be appointed by County Councils, and not by District Councils as proposed in the Bill. We observe with much satisfaction that the same view as that we expressed is taken by others who are well qualified to consider the subject, and notably by Sir LYON PLAYFAIR, who ably showed in the House of Commons the effect which the Local Government Bill, as it now stands, would have upon the public health service.

Experience has clearly taught that the only administration in small urban and rural districts which has been of any real value has resulted from the combination of such districts, and that it has been only nominal where the health officer has acted for a small area, and has been engaged in the general practice of his profession. In too many instances he has received a small salary which has been expended in ensuring the absence of service, for an officer thus placed has had no proper opportunity for the performance of his health duties. The County Councils which are now to be created will certainly have the same power of combining districts that has hitherto been possessed by the Local Government Board. This power, however, it is well known, has been very sparingly exercised, and it cannot be anticipated that the County Councils would be more willing than the Local Government Board to control the action of District Councils in this respect. It may be assumed, therefore, if the Bill without amendment become law, that the employment of general practitioners for public health purposes in small districts will be continued, while at the same time the influence of the Local Government Board for promoting active sanitary work will be greatly diminished by the deprivation of its powers on the one hand, and by the constitution of intermediary authorities, the County Councils, on the other.

To attach medical officers of health to County Councils instead of to District Councils, and to allow the former to appoint each officer to the local districts which should engage his attention, is a remedy so obvious that we are compelled to believe the Government will adopt it if they desire that the health improvement of districts shall be continued. The reasonableness of Sir LYON PLAYFAIR'S argument is perhaps best shown by the manner in which it was dealt with by Mr. LONG. There is, in fact, nothing in the proposal inimical to the principle of local self-government, seeing that the County Councils are themselves constituted by direct election; and it may be remembered that the proposal is no new suggestion, for it was provided in the London Government Bill brought in during the last Liberal administration that medical officers of health should be the officers of the central metropolitan body, and should act as advisers to the district authorities. The whole question is therefore one of efficiency, and should be considered in this sense only.

Sir LYON PLAYFAIR used as illustration of his contention the organisation of the sanitary service in the county of Cheshire, and compared that in which the medical officer

deals with a combination of districts with that in which a small area appoints its own officer; and he argued that, if the scheduled towns and London were excluded, one hundred and eighty medical officers would be well able to supply the best sanitary knowledge for the remaining eighteen millions of people without greater increase of cost than under the present inefficient system. So far, therefore, the public would not be burdened with greater expense. The Council of the Society of Medical Officers of Health appear to entertain no doubt as to the advantage to the public which would accrue from this change in the Bill, and due weight should attach to those upon whom has fallen the duty of advising local authorities as to the administration of the Public Health Act.

In a leading article in *The Times*, however, the question does not appear to be fully understood, for it is there contended that there is nothing to prevent the right management of sanitary affairs from being carried out in practice under the Bill, and that if sanitary matters are neglected it will only be because the new electors wish it to happen. For our own part, we are not pleading for the removal of local control from the management of sanitary matters. The health of districts, however, is not merely dependent upon the absence of nuisances, which we may regard as a matter of especial local concern; but if England is desirous that its population should improve in their health and productive ability, opportunity for something beyond the maintenance of cleanliness must be given. What, indeed, is required for this purpose is the appointment of skilled officers over sufficiently large areas, the existence of a relation between officers thus locally employed and those engaged in the central service of the State, and the assurance for all acting in local districts that they shall be able with sufficient independence to perform the duties to which they are appointed. The Bill promises none of these; it does little more than dislocate the present relation of central to local service, and adds to the probability that the difficulties which now stand in the way of sanitary advance will be perpetuated. To give electors a faulty system of administration, and then to argue that it will be their own fault if the health of communities should suffer, is a course, we are convinced, which will not, on consideration, commend itself to a journal which has for years been foremost in its demands for the social improvement of the people; nor, indeed, can we believe that the House of Commons, which has already devoted so many hours to a consideration of the effects of the Bill on such a question as the licensing of public-houses, will hesitate to give some share of its attention to a subject affecting the health and lives of vast numbers of persons.

WE recently called attention to the unsatisfactory sanitary condition of French towns disclosed by the mortality statistics published for the twelve months of 1887 in the *Statistique Sanitaire des Villes de France*. These conclusions were based upon the gross death-rates from all causes in the fifty-one French towns dealt with in this monthly return, each having a population at the time of the last census in May, 1886, exceeding 30,000 persons. The mean death-rate in these fifty-one towns during last year we calculated to be equal to 25·3 per 1000, exceeding by no less than 4·5 the mean rate in the twenty-eight large English towns dealt with by the Registrar-General in his Weekly Return. Judged, however, by that sensitive but trustworthy test of sanitary condition, the mortality from enteric fever, the health-condition of the French towns appears in a still more unfavourable light than if judged by the death-rate from all causes. The deaths reported from typhoid fever in the fifty-one French towns during 1887 were 4297, exclusive of Poitiers, for which no information concerning the causes of death is published. These 4297 deaths are equal to 0·69 per 1000 of the population in the French towns; while the mean death-rate from "fever" in the twenty-eight English towns (including typhus, enteric, and ill-defined forms of continued fever) did not exceed 0·22 per 1000. It is certain, therefore, that the mortality from typhoid fever in the French towns last year was considerably more than three times that which occurred in the English towns. With regard to the death-rate from all causes, it was noted that the largest excess of mortality occurred in the smaller of the French towns, from which it might be inferred that the greatest sanitary deficiencies existed therein. This conclusion is fully supported by the evidence afforded by the death-rates from typhoid fever. In the ten largest towns, including Paris, the mean death-rate from typhoid fever last year was 0·74 per 1000, and in the twenty towns having populations ranging from 50,000 to 100,000 the rate was 0·45; while in the twenty-one smaller towns, with populations ranging between 30,000 and 50,000, the rate was no less than 0·85 per 1000, or nearly four times the rate that prevailed in towns of the same size in England. Among the largest French towns the rate was 0·60 in Paris (nearly four times the London rate), while the highest rates were 0·90 in Toulouse, 0·93 in Bordeaux, 1·14 in Rouen, 1·25 in Marseilles, and 3·68 in Havre. Among towns with populations ranging between 50,000 and 100,000 the following rates may be noted: 0·91 in Tours, 1·16 in Brest, and 1·29 in Montpellier. Among the smaller towns it may be pointed out that the death-rate from typhoid fever exceeded 1 per 1000 in Béziers, Avignon, Lorient, Cherbourg, Cette, and Angoulême; the rate in the latter town being 3·84 per 1000, and exceeding the remarkably high rate in Havre. In contrast with these high death-rates from typhoid fever in the French towns, it should be noted that the highest death-rates from "fever" in twenty-eight of the largest English towns last year were 0·37 in Salford, 0·39 in Portsmouth, and 0·63 in Preston. The rates in Havre and in Angoulême were therefore more than six times as high as the highest rate in any of the largest English towns. It is difficult to realise what a death-rate of nearly 4 per 1000 from typhoid fever implies. It may safely be assumed that this rate signifies at least 24 cases of attack per 1000 of population; and it must be borne in mind that comparatively few cases occur among children or among elderly persons, so that probably at least 5 per cent. of the younger adults in the population of Havre and Angoulême were attacked by typhoid fever, and suffered many weeks of incapacitating illness during last year. The publication of these mortality returns in France constitutes an important step towards sanitary progress, although, as the returns contain only crude numbers and no calculated rates, their value as a

means of educating public opinion in France on health matters is unfortunately minimised.

FOR some years past there has been an evident tendency on the part of students of medical etiology to remove from the category of diseases due to chill, and to ascribe to septic or other morbid influence, certain maladies whose direct dependence on temperature changes has never before been questioned. Among this class of observers Dr. W. H. RANSOM is to be numbered. In an interesting lecture delivered by him last November, as President of the Nottingham Medico-Chirurgical Society, and an abstract of which appears in another column of our present issue, he discussed the general bearings of this question in a manner which, if it does not carry conviction with it, is at all events suggestive of thoughtful speculation in a not unpromising field of research. Under the head of "chill diseases," so-called, he includes bronchitis, pneumonia, pleurisy, and rheumatism. While admitting that these and others of associated types, which might be mentioned, are apt to show themselves especially during cold seasons and in temperate or cold latitudes, he has been unable to see in the majority of cases observed by him such a direct correspondence between the chill and the disease as would satisfy him that there exists a valid relationship of cause and effect. Finding a considerable discrepancy in the death-rate from such disorders in adjacent districts, and failing to find in their effects upon internal viscera the sharp limitation both in duration and extent which characterises the superficial and simple inflammations due to direct cold or heat with which the surgeon is familiar, he comes to the conclusion that chill is commonly, as regards the diseases mentioned, a coefficient of the cause rather than the primary excitant itself. That there is a proportion of truth in this view, whatever its exact measure, we will not deny. Certainly some diseases still almost universally recognised by the profession as the products of cold are capable of imitation by altogether different processes. Take as an example septic pneumonia arising in the course of infective fever or during the puerperium. Still, we can hardly agree with Dr. RANSOM that the direct action of chill with antecedent exposure is not very frequently demonstrable in the origin of deeply seated inflammations. Sometimes, indeed, the course of truly septic processes seems to be determined by changes of external temperature. How otherwise is one to explain the development of some cases of scarlatinal nephritis or rheumatism which arise, as far as one can trace them soon after, and not before, some personal exposure? As regards the therapeutic use of cold applications and their positive advantage to a patient in fever—a point noted by Dr. RANSOM as illustrative of successful resistance to the influence of external chill,—we cannot but remember that in many such cases the vehemence of vascular action and pyrexia is practically such as to confer a sthenic type upon the disease and the constitution which is for the time unconquerable by any force but that of exhaustion. After this stage is reached we may look for a chill disease, but just at this point the value of the remedy ceases; it is discontinued; and the proof of its possible effects, if continued, is not forthcoming. An important matter of which it seems to us Dr. RANSOM takes too little notice is the influence of the nervous system in the production of inflammatory diseases of the viscera. In seeking for morbid processes, short-lived and limited in extent as those which are alone truly referable to chill as an exciting cause, hardly enough allowance is made for the difficulty of definition or of resolution in highly vascular organs capable of and prone to rapid engorgement in response to vaso-motor changes. We have not space, however, to follow out in detail all the propositions by which the new theory of the etiology of disease is supported in this interesting contribution to medical knowledge.

Annotations.

"Ne quid nimis."

THE MEDICAL BENEVOLENT COLLEGE FESTIVAL.

IT must be no mean cause that can command such a meeting as that which gathered at the Métropole Hotel on Tuesday evening. The speeches of the Lord Mayor, of his Royal Highness the Duke of Cambridge and of Lord Dartmouth, as the expression of the sentiments of distinguished laymen towards the medical profession, are of more than passing importance. The Medical Benevolent College might be regarded by cold and superficial people as a merely domestic affair, with which only the medical profession was concerned. But the nature of medical work is of such a character that it ought to excite the gratitude of the public towards the medical profession. This point was well brought out by all the speakers. The Lord Mayor was singularly happy and forcible in his appeal to the rich men of the city. In the sanitary condition of the city, where thousands are aggregated together daily with impunity, he saw an obligation to the medical profession. In the self-forgetfulness with which medical men run to the relief of families in the distress of disease, when others run away from them, he saw another great appeal to the benevolent to help the great charity for which he was pleading. The Lord Mayor was supported on the one hand by the Duke of Cambridge, and on the other by Lord Dartmouth, who both took similar ground. The Duke of Cambridge, replying for the army, expressed with emphasis and reiteration his respect for the profession, and his constant desire to promote harmony between it and the War Office. Without the medical profession an army could not be maintained, either in peace or in war. It is of course true that medical men should in the first instance, and with much cultivation of self-dependence, trust to themselves. Even for rainy days they should prepare themselves. It is equally true that when adversity befalls them, either prematurely or with undue severity, or when they are stricken down altogether, they may fairly expect some pity and help at the hands of their more fortunate brethren. It is no charity to lose sight of or deny these points, and medical men who do so bring their profession into discredit. Personal improvidence or extravagance on the part of medical men is bad, and the want of generosity on the part of prosperous members of the profession towards the less fortunate is little better. The crowded meeting of representative practitioners from all parts of the country on Tuesday night is the best guarantee that the spirit which founded Epsom College is still strong amongst us. But after all is said, the medical profession has strong claims on the benevolent outside. As Dr. Holman said, faithful medical service is often not compensated by mere fees, even when they are paid. And what a great

unpaid account the profession always has with the poor. Such things are often said; but they were said on Tuesday night with exceptional force, and in a way that we may hope will extend the basis of support of the Medical Benevolent College. In replying to Mr. Wheelhouse's toast of "The Corporations," Sir Andrew Clark, with characteristic energy, undertook to try to interest the great medical corporations—or at least his own—in the Medical Benevolent College; and we shall be curious to see if he can excite in those bodies any practical sympathy with the benevolent work which presses so heavily on members of the profession in their private capacity. We have left ourselves no space in which to speak of the work done by the College in well educating the fatherless, and in helping by pecuniary grants those widows or members of the profession who are in need. Such work speaks for itself. If the profession does its part in this work of mercy, the public is not likely to neglect its share.

ARMY MEDICAL STAFF CORPS.

THE new regulation, to which we drew attention last week, restricting the service of the men of the Army Hospital Corps to three years with the army, was the subject of a question in the House of Commons by Dr. Clark on Tuesday. He asked whether this order had been issued with the concurrence of the Director-General of the Army Medical Department, and whether the Secretary of State had considered the results which might be expected from removing the men of the corps just as they became skilled in their duties and replacing them by raw, unskilled men. Mr. Stanhope replied that "every army order is issued on the responsibility of the Secretary of State after consultation with his professional advisers. The importance of having a large reserve of trained men of the Medical Staff Corps available in war time is so great that the disadvantage of a somewhat curtailed training must be faced." It will be observed that he carefully refrained from saying who were his professional advisers in the matter, and we cannot believe that Sir T. Crawford could have given such advice. The policy to be adopted seems to be that of providing a reserve of moderately trained hospital corps men, to be available in war time, and doing so at the expense of the efficient nursing of the soldiers during the time of peace. Mr. Stanhope can hardly have given due consideration to the important question involved in this decision. The objection to the application of the three years' service to the Army Hospital Corps is not, as Mr. Stanhope's answer would seem to imply, "the somewhat curtailed training" of the men who will join the reserve, but the removal of the orderlies from the army hospitals just as they are becoming efficient nurses. There cannot be a doubt that in serious cases of fever and many other diseases the success of the treatment greatly depends on the nursing. The army returns show how much fever prevails among the troops at home and abroad and that enteric fever has of late years increased in the army as a consequence of the greater proportion of young soldiers. And yet under these circumstances Mr. Stanhope sanctions a measure the result of which must be to consign these cases to the care of orderlies, who are for the most part untrained and unskilled, for efficient training necessarily requires a considerable period of time. Surely a soldier is justly entitled to demand that in his sickness he shall be properly tended and carefully nursed, a condition which we believe to be impossible under the proposed system of short service in the ranks of the Army Hospital Corps. If this is one of the results of the new organisation of the War Office, the sooner a change is made in it the better for the soldier. We trust that those members of Parliament who know the value of careful nursing in sickness, and who take an interest in the welfare of our soldiers, will not allow this question to drop, but will insist upon such an alteration in the order as will ensure an adequate number of well-trained orderlies being, in time of peace, available for the service of the military hospitals.

MYOSITIS OSSIFICANS.

DR. A. A. LENDON of Adelaide has recorded, in the Transactions of the First Intercolonial Medical Congress (August and September, 1887) the particulars of a remarkable example of the very rare disease myositis ossificans. The paper is the more valuable since it comprises full anatomical details, with illustrations of the skeleton on the subject. The man died at the age of forty-six, having first shown signs of the affection when only eight years old; but he had always been clumsy with his right arm and forearm and, as during boyhood the stiffness increased, it was attributed to injuries received at various times. He became greatly deformed, with bent rigid back and limbs, and before his death he suffered from numerous bedsores, and was reduced to a pitiable state. Many muscles were partially or wholly converted into bone, notably both latissimi, which caused the scapulæ to be firmly fixed to the thoracic cage. In the limbs the joint surfaces were fairly normal, or the cartilages in fibroid degeneration, although the joints were greatly surrounded by irregular masses of bone due to ossification of muscles and ligaments. The spinal and costal ligaments were all ossified, making the back quite rigid. Dr. Lendon also quotes an interesting description of a similar case from a work on the city of Cork, by Charles Smith, published in 1750, and reproduces the engravings that represent the skeleton of this case. Reference is made to Mr. Sympson's paper on the subject, to the case described by Mr. Cæsar Hawkins, to the specimen in the Hunterian Museum, and to some recently recorded cases, which, however, lack the post-mortem evidence that renders Dr. Lendon's essay so important to the pathologist.

GLASSBLOWERS' CRAMP.

M. PONCET has made a communication to the Académie des Sciences upon the subject of a professional deformity of the hand to which he says attention has not heretofore been drawn. The deformity is by him described as consisting in a permanent and very pronounced flexion of the fingers upon the hand, which is more pronounced in the case of the third and fourth fingers than the other two, and leaves the thumb wholly unaffected. The inflexion occurs principally at the second joint, so that the second phalanx is fixed almost at right angles to the first, and it is attributable not to sclerosis of the skin or tightening of the deeper tissues, but to retraction of the flexors and tendons, and more particularly of the superficial flexor. At this diagnosis the author has arrived by a careful examination of the affected fingers, and he argues much from the circumstance that the malady is unaccompanied by pain. The distal joints are more or less deformed, with some tendency to subluxation, and the fingers are bent into a curve, and cannot be extended. The skin of the palmar surface is somewhat thicker, and more callous than is usual even with manual labourers. This deformity is known among glass-workers as *main en crochet* or *main fermée*. It supervenes after a short practice of the art of glassblowing, and increases progressively. It is further stated upon the authority of an expert (Mr. E. Rollet) that it attacks the majority of glassblowers, and is most marked in those who have been longest at the work. M. Poncet thinks that the deformity which he has described is due to the continuous application of the hand to the tube with which a glassblower manipulates his "metal." He stated that, during the eight hours a day through which

such a man ordinarily works, his fingers are without intermission kept closed about this tube, and the constraint induces, even within a month, some difficulty in effecting complete extension. This difficulty becomes greater and greater as time runs on, until at last it develops into the crippled condition of the hand which he has described. Altogether, he says, the trade of the glassblower as pursued in France is so unhealthy that the operatives who habitually take it up as young men are obliged to abandon it on attaining about thirty-five years of age, and do so with their hands permanently crippled in such a way as to render them useless for almost any other occupation.

BOROFUCHSIN AS A STAIN FOR TUBERCLE BACILLI.

PROFESSOR LUBIMOFF describes in the *Meditsinskoe Obozrénie* a new stain for tubercle bacilli, which he calls borofuchsin. It consists of—fuchsin, 0·5 gramme; boracic acid, 0·5 gramme; absolute alcohol, 15 grammes; distilled water, 20 grammes. Prepared thus, it has a slightly acid reaction; it is quite clear and not liable to spoil by being kept, consequently it is always ready for use. The sputum is dried on a cover glass, and stained by being heated in contact with the borofuchsin for one or two minutes. The stain is then washed out by treatment with dilute sulphuric acid. The specimen is then washed with alcohol, and subsequently immersed for half a minute in a saturated alcoholic solution of methylene blue. After being washed in distilled water and dried, the examination of the specimen is made in oil of cedar or in a solution of Canada balsam. In exactly the same way sections of tuberculous organs may be stained after hardening in spirit, only in such cases the steps of the operation must be somewhat more prolonged. The main difference between this and other staining processes for Koch's bacilli is that, when borofuchsin is used, the process of washing it out with sulphuric acid is an almost instantaneous one. All other bacilli are, as when other stains are used, rendered colourless and invisible, the tubercle bacilli being alone seen.

THE NATIONAL PENSION FUND FOR NURSES.

THE importance of the steps which have been taken for the purpose of founding a Nurses' Pension Fund upon a national scale have induced us to bestow upon the discussion of the prospectus which has been issued a not inconsiderable space, but it appears that we have not yet given expression to all the serious objections that are entertained by those whom it is the promoters' object to benefit. Indeed, we have not pretended—we have not even wished—to make our statement exhaustive. Our desire is simply to secure for the nurses the advantages of a sound scheme, unprejudiced by whimsical regulations on the one hand or by degrading conditions on the other. But it has been brought to our knowledge that some, at least, among the higher class of nurses—ladies to whom nursing is a profession rather than a means of livelihood—are deeply affronted by the manner in which an eleemosynary character has been stamped upon a scheme which is offered for the benefit of all nurses without distinction. They say, and justly, that the proper objects of a compassionate fund are such as are the victims of misfortune, not such as are capable of the efficient pursuit of a chosen profession. To these latter the proffered dole is not only superfluous—it is insulting; and they rightly resent the offer of undemanded charity. Alike in the interest of those who do stand in need of assistance and of those who do not, they require that what alms the public bestow shall be bestowed upon the needy, and upon them alone. To admit the self-supporting and self-sufficient to a share is, *pro tanto*, to rob the others of the one right which misfortune itself respects—the right to sympathy and help at the hands of their more fortunate neighbours. And even those who would profit in a pecuniary sense by such a misapplication of charitable funds are not to be envied on that account. Could they accept the boon, they would lose much more than an equivalent in dignity and self-respect, to say nothing of the moral and material loss involved in anything which derogates from the public estimation of any class in the community. Of such sentiments it is impossible to feel even a moment's doubt that they are sound and just. The public is beginning, somewhat tardily, to recognise the worth and dignity of the peculiarly womanly work of nursing, and it would be most unwise, worse than unwise indeed, for those who represent the craft to compromise its position before the world by arrangements unworthy the dignity of self-respecting independence. On the other hand, it is also plain that this unfortunate scheme has originated in an equally just sentiment of gratitude on the part of the public to those whose services in times of distress are simply inestimable. That such a feeling should find expression in some substantial form is most natural and right. Nor is there really any difficulty. Only let the alms be given to the proper objects, and the subscription benefits be arranged upon a business footing. The unadvised admixture of these two things in the scheme which it has been our duty to criticise is one of its greatest blots, but we hope that such a revision as we last week suggested to the promoters will shortly enable us to second their endeavours. At present nurses hesitate or even altogether refuse to entertain their proposals, and we cannot but think that, in the circumstances of the case, they are right in doing so. But the difficulty may easily be removed by the adoption of sound principles in what we are sure is a well-intentioned movement, and we sincerely hope that no indirect or unworthy consideration will be suffered to prevent such an issue of the present discussion.

SUFFOCATION OF INFANTS.

THE frequency with which deaths from suffocation occur among London children is a matter requiring very careful attention. Two such cases were lately the subject of inquiry at St. Pancras Coroner's Court. In both instances young infants were overlain; and the result can hardly be wondered at when we read of as many as four persons—two adults and two children, including the infant—sleeping together in a bed four feet in width. In this case the unfortunate victim of overcrowding was an illegitimate child. The accident has been known to repeat itself in a single family with surprising regularity. In the majority of cases it would certainly be unjust to impute any wrong intention, but the blame due to carelessness cannot be so easily set aside by parents who are thus the direct cause of their children's deaths. The practice of having a separate cot for the infant is the one effectual remedy for this evil. Though less generally recognised than it ought to be, as these cases of suffocation prove, it is happily not unknown among the poor. If only as a means of allowing the child a freer and fresher atmosphere, apart from any risk of overlaying, its general adoption is quite necessary. The objection of expense is not a real one, since a chair or two may, and often do, serve as an extemporised cot. However we regard it, the cot system is one against which nothing can be said, and it is commended by every rational consideration. Overlaying is not the only fault of its class to which we would direct attention. Another serious folly is that of wrapping up young children about the head with a shawl while in bed. If this custom be followed, suffocation may easily occur should the child turn in sleep and bury the face in its too comfortable surroundings. This habit of turning over, indeed, is one which a careful parent should guard

against at any time, and in view of its frequent occurrence it is no more than ordinary wisdom to dispense with all such wrapping as we have referred to.

THE BELGIAN MEDICAL FEDERATION AND THE NEW BILL ON DISPENSING.

A CIRCULAR has been issued by the Belgian Medical Federation, addressed to the presidents of all the medical *cercles* or branch associations, requesting them to call special meetings of their respective branches to discuss the new Bill by which, as our readers are aware, it is proposed to abolish the right of dispensing their own medicines, which is now enjoyed by a considerable proportion of Belgian practitioners. It is hoped that through these branch associations pressure may be brought to bear on members of the Legislature, which will result in a serious modification of the proposed measure, to the general principle of which, however, the Federation, as is pointed out in the circular, assented to both in 1868 and in 1880, when a regular *modus vivendi* was agreed upon between it and the Pharmaceutical Association. This agreement, however, specially provided that every medical man already enjoying the right to dispense should continue to do so as long as he should remain in the same locality. It is on the question of these vested rights that the proposed Bill is considered so unsatisfactory, for by it they will in no case be respected beyond the period of fifteen years, and in many only for five years, while, in order to be recognised at all, they must have already existed for three years. In discussing the general question of dispensing by medical men, *Le Scapel*, in answer to the complaints of some pharmacists that medical men having had no proper pharmaceutical training are utterly incompetent to prepare or to estimate the value of drugs, and therefore should not in any case be allowed to exercise what is called the *cumul*, or combination of the two professions, points out that it is very misleading and erroneous to talk of the existence of any *cumul* at all; that medical men, even though they may be allowed to dispense for their own patients, do not practise pharmacy proper. They do not, and may not, keep an open shop, and they never prepare or compound medicines of an elaborate character, their work being almost entirely confined to putting up simple mixtures with preparations which they are obliged to obtain from a pharmacist, and for the quality of which he is responsible, for in Belgium a medical practitioner who dispenses may not purchase his drugs from wholesale houses. There is therefore no great need for him to be acquainted with all the complicated processes for the estimation of samples, and he may surely be trusted to put up mixtures of preparations the purity of which is already guaranteed.

NEW INFECTIOUS HOSPITALS.

A DISTINCT impetus has been given to the provision of isolation hospitals by reason of the recent prevalence of small-pox in various parts of England, and though all the instances in which a determination has been arrived at either to commence such provision or to improve and enlarge the existing accommodation cannot properly be regarded as due to this cause, yet in the majority of the cases which we have from time to time recorded fear of small-pox has been the main stimulus to action. Of this there is, of course, no reason to complain, provided that the sanitary authorities do not let themselves be moved by panic into the construction of buildings which will not secure the immediate isolation of first attacks of all such infectious fevers as are likely in future years to arise in their districts. That the provision should be suitably adapted to this principal controlling need should, above all things, be borne in mind. Amongst the recent items of intelligence as to this are the following:—The Nottingham Town Council have decided to erect a new permanent hospital for infectious diseases at a cost of £23,000; the Grimsby Town Council have decided to erect a brick building to accommodate twenty additional small-pox patients; the Burton Town Council have, on the advice of their Health Committee, passed a resolution to the effect that it is desirable that a permanent infectious hospital should be established; the Sutton-in-Ashfield Local Board of Health has selected a site of somewhat over 5000 square yards for the erection of a similar building; and the Paisley Abbey Parochial Board have resolved to erect a hospital giving accommodation to 100 patients. It is not clear, however, as regards the latter hospital, how far it will be reserved for any special diseases.

HEALTH OF THE EMPEROR OF GERMANY.

THE following telegram was received on Thursday morning at THE LANCET office from Charlottenburg:—

"During the last week inflammation was noticed in the neighbourhood and below the opening into the trachea, but external to it. On Saturday evening slight shivering took place. On Sunday there was little bronchitis. Pneumonia was anticipated, but did not supervene. It is considered that there is at present peritracheitis with pyæmia."

In spite of the cessation of all official bulletins of the Emperor of Germany's health, it has been abundantly evident that his fell disease has been creeping on apace, and that the Imperial patient was being steadily worsted in the struggle. It was not surprising, therefore, to learn a few days ago that the case had become critical and that the worst fears were entertained. It seems that fever has set in accompanied with bronchitis. It is well known that in cancer of the larynx, as of any other part in communication with the lungs, septic pneumonia is very likely to supervene, and repeated careful examinations appear to have been made to discover such an affection of the lungs. The latest accounts speak of the absence of all signs of pneumonia and of the lessening of the bronchitis. So that some other explanation of the fever, which still continues, has to be sought. It has been suggested that an abscess has developed in the neighbourhood of the trachea, and there seems to be only too much reason to fear that this is so. Such abscesses often develop in connexion with cancerous formations in internal parts, and very gravely exaggerate the danger of the primary disease. Blood poisoning from such an abscess often ensues, and, as the above telegram shows, pyæmia has already developed. Whatever the exact complication is, there is no doubt ground for the gravest anxiety, and for fear that the close of this painful case is not far off.

UNWHOLESOME AIR IN SCHOOLS.

DURING the past year Dr. George Reid, medical officer of health for the rural district of Stafford, has carried out a systematic inspection of the elementary schools within his jurisdiction; and in each case he has made a careful analysis of the school air, the samples being taken as far as possible after the children had been in school for some hours. The various results, and the conditions tending to affect them, are tabulated in the report compiled, and in by far the majority of instances the volume of carbonic acid present per 1000 volumes of air was found to range between 2·039 and 3·708. This must be regarded as excessive, and an atmosphere giving such indications cannot be looked upon as a wholesome one for children to breathe habitually during many hours of the day. The minimum requirement as to air space in elementary schools certainly fails of itself to secure a wholesome atmosphere, and it can only be by making arrangements whereby there shall be a frequent interchange and movement of air without excessive loss of heat that any

proper approach to purity of atmosphere can be obtained. Dr. Reid advocates central fireplaces with flues passing beneath the floor, Tobin tubes, and outlet ventilators in the roof, as most likely to produce the results desired.

VICTORIA UNIVERSITY.

THE annual meeting of the Court of Governors of Victoria University was held on the 12th inst., in the board-room of Owens College, Manchester, Dr. Greenwood, Principal of the College, presiding. After the transaction of routine business, Professor Milnes Marshall proposed that the Council be empowered to grant diplomas in Sanitary Science to duly qualified candidates, on the terms and conditions laid down in their report, and that the proposed regulations for attendance and examinations be approved. The regulations provide that the examination shall be in two parts, and be written, oral, and practical. In the first part the subjects of examination are chemistry, with special reference to the examination of air and water; physics in its application to health; sanitary appliances, in relation to the construction of dwellings, water supply, sewerage and drainage, and the disposal of refuse; the use of the microscope as applied to the examination of air, food, and water, excluding work special to the duties of a public analyst; vital statistics as regards the methods employed, the conclusions deducible therefrom, and the classification and tabulation of returns of sickness and mortality. The subjects of examination in the second part include medicine in relation to the origin, growth, and prevention of disease; sanitary administration, statutes, and bye-laws relating to public health and sanitary reporting, the candidate being expected to visit and report upon the sanitary condition of some actual locality asssigned to him by the examiners. Dr. Leech seconded the resolution, which was passed without comment.

METABOLISM IN TYPHOID FEVER IN CHILDHOOD.

THE urine gives perhaps the best indications of the tissue changes proceeding in typhoid fever, as in any other disease. Jacubowitsch (*Archiv für Kinderheil.*, Bd. ix., Heft. i.) has made an important contribution to our knowledge of the metabolic changes in typhoid fever in children. He insists on the necessity for knowing the actual quantity of nitrogenous material daily ingested, and also the quantity of urine and other excreta, together with the daily loss of carbonic acid and water. There is a considerable diminution in the quantity of urine passed during the pyrexial period, but no definite correspondence was noted between the elevation of temperature and the quantity of the urine. At the end of the first week there was a loss which varied from 50 to 200 cubic centimetres, and even to 500 cubic centimetres in some cases, the quantity voided being only one-half of the normal. These diminutions were rather increased during the second week, whereas at the end of the third week the quantity tended again to rise, and in some of the cases was twice the amount of the second week. During the fourth week the normal was still not reached. As a rule, the colour of the urine was deeper red the less the quantity passed; but this did not always obtain, for in some instances the colour was nearly natural. The reaction was usually acid—sometimes, however, only slightly. As was to be expected, the density of the urine was inversely proportional to the quantity. Gerhardt states that albuminuria results from variations in blood pressure due to the pyrexia, but Jacubowitsch does not substantiate this, for he detected no albumen in the urine in his cases at any period of the disease. The estimations of the urea discharged during the disease are very interesting, and appear to be ranged in two classes: in one the urea discharge was large during the first week, but then gradually lessened as the disease progressed; in the other class the discharge of urea gradually augmented with the continuance of the fever, and continued to rise until the fever ended. The uric acid discharged was found to correspond with the elevation of temperature, and to be greater during the pyrexia of the first period than during the later stages of the disease. A diminished excretion of chlorides was noted all through the morbid process. The excretion of phosphates and sulphates also was grouped into two classes like the uren, in one the quantity being increased at first, but then lessening by degrees, and *vice versâ*. Jacubowitsch believes that the activity of the poison in the blood has more influence in altering the urine than has the fever or the febrile accompaniments.

MARSHALL HALL PRIZE.

FIFTEEN YEARS have passed since the Marshall Hall Fund was instituted with the twofold purpose of commemorating the late Dr. Marshall Hall, and of encouraging research in that branch of natural science which he did so much to develop. The Trust provides "that a prize shall be given every fifth year for the best original work done and recorded in the English language during the previous quinquennium in physiological or pathological researches relating to the nervous system, and that the prize shall consist of the simple interest derived during the preceding five years from the amount of the capital fund." The first award was made to Dr. Hughlings Jackson, the second to Dr. Ferrier, and this year the Council of the Royal Medical and Chirurgical Society, in whose hands the fund was placed, have awarded the prize to Dr. Walter Holbrook Gaskell, F.R.S., Lecturer in Advanced Physiology in the University of Cambridge. The Council have invited Dr. Gaskell to give some account of his work before the Society, and a special meeting will be convened for this purpose, which will be duly announced in our columns.

A FACULTY OF MEDICINE FOR MARSEILLES.

THE scheme for the elevation of the present medical school in Marseilles to the rank of a Faculty is being elaborated by a commission. Amongst other important changes, it is proposed to establish a chair of Bacteriology. The inhabitants of Marseilles have only too often had cause to recognise the importance of this subject, as epidemics of various kinds have been frequent visitors. The municipality has been agitating for a Faculty for more than twenty years, and now at last there seems to be some real hope that their wishes may be shortly realised.

HORSEFLESH OR BEEF.

THE question whether beef or horseflesh is the more suitable diet for human consumption has long ago been settled in favour of the former by the common practice alike of civilised and savage races. An argument founded on theoretical grounds could hardly lead to any other conclusion. There can be no doubt that the flesh of the well-fed and easily circumstanced ox is far less likely to resist the work of digestion and assimilation than the stringy fibres of an animal whose life is a fairly constant round of muscular exertion, and in the majority of cases of overwork. Professor Gamgee has stated that bad effects are apt to follow the ingestion of the meat of overdriven animals, and if his observation be correct in the case of animals generally it cannot but apply to that of the horse. Apart, however, from any question of direct morbific influence, the quality of such meat must be, and is, inferior. Deficient in fat, it lacks what is probably the chief source of supply for the

wear and tear of vital energy, while the proteids it contains are embodied in a dense tissue difficult of assimilation. However acceptable the flesh of the horse may be, therefore, when it alone is obtainable, it is certainly not to be compared as a food to ordinary butcher's meat, and to pass it off as beef (a practice by no means unknown) is a fraud not only disreputable, but distinctly, if not in a high degree, injurious. The summary conviction and punishment of a butcher in Manchester a few days ago for practising this kind of imposition may serve as a warning to others who may be disposed to follow his example. At the same time, it is evident that, however deterrent the penalty imposed, it will be difficult to eradicate this form of unfair dealing unless the poorer class of customers are watchful to protect their own interests against unscrupulous salesmen.

THE MEDICAL OFFICER OF HEALTH FOR BRADFORD.

WE learn with much pleasure from the *Bradford Observer* that three memorials will be addressed to the Town Council of Bradford praying for the reappointment of Dr. Hime, whose five years' period of office has nearly expired. The first of these is from merchants and large ratepayers, the second from working men, and the third from members of the medical profession. We doubt very much whether the Town Council need any outside stimulant to adopt the course which common sense suggests; but the memorials are gratifying evidence of the esteem in which Dr. Hime is held. Apart from Dr. Hime's recognised ability, the Council are doubtless aware that there are other reasons for the continuance of their medical officer's services: no newly appointed officer can begin where his predecessor leaves off; and, however capable an officer might be elected, it would take him some time to study and understand the sanitary requirements of Bradford.

MEDICAL ETIQUETTE IN BOMBAY.

THE *Scottish Leader* comments on what is described by a correspondent of the *Bombay Gazette* as a case of etiquette in the medical profession in Bombay. In this case the patient's European doctors were in attendance. They had seen the case in the morning, and determined to do so again in the evening. In the meantime the patient was taken much worse, and the nearest available doctors were summoned. When the gentlemen first in attendance came, they found the new attendants doing what they could, and thereupon declined to give further advice in the case, which soon ended fatally. Our contemporary questions the action of the regular attendants. We should require to know more of the facts and circumstances before we could express an opinion. It is perfectly legitimate, of course, in an emergency to take the nearest advice, but before condemning medical men for taking offence at such an obvious use of common sense and liberty, we should have to be assured that they were beyond reach of call, and that their proper treatment of the case had not been unduly interfered with. "Too many cooks spoil the broth."

INTRAVASCULAR INJECTIONS IN COLLAPSE.

DR. DIARKONOFF has made a number of experiments on ten healthy dogs with a view of testing the effect of an intravascular injection of common salt, to which a little alkali has been added, on a collapsed condition of the organism. In order to induce collapse, chloroform was administered, and when the animal had shown signs of being in a more or less dangerous condition a small quantity of Schwarz's solution (which consists of chloride of sodium 6 grammes, caustic soda 0·05 gramme, in 1000 grammes of distilled water) was introduced into the distal end of the femoral artery, or into the proximal end of the femoral vein or the jugular vein. A remarkable effect was produced by these injections on the character of the pulse and on the blood pressure. In some cases in which the heart appeared to have stopped, contractions were by this means reinduced. The effect on the respiration was not so constant; still, this usually improved. Of course, when the chloroform was pushed beyond a certain point, saline injections and artificial respiration alike failed.

HER MAJESTY THE QUEEN.

CURRENCY has been given in an evening contemporary to an idle report that the Queen has of late been suffering from sleeplessness, which a resort to simple and obvious expedients has been found incapable of alleviating. We are glad to be able authoritatively to state that the rumour is entirely without foundation, and that Her Majesty is now, and has been during the whole of her visit to Florence, in the enjoyment of her wonted health.

DEATH OF MR. MATTHEW ARNOLD.

IN common with all who love truth and the faculty of perceiving and expressing it, we deplore the too early death of Mr. Matthew Arnold, whose writings have elevated the art of criticism and the fame of poetry. Mr. Arnold suffered from heart disease, but in a general way was little hindered by it; so little, indeed, that he was apt to be unmindful of it, and to take liberties which it would have been better to avoid. On the day preceding his death he had in a playful mood taken a slight leap, which did not at the time appear to have hurt him. He did not at first succeed, but did so on a second attempt. It is not impossible, however, that his sudden death the next day had relation to such and similar indiscretions. His distinguished father also died with equal suddenness.

FOREIGN UNIVERSITY INTELLIGENCE.

Bonn.—Professor Nussbaum having vacated the post of Prosector of Anatomy, Dr. Schiefferdecker of Gottingen has been appointed to it.

Göttingen.—The Professorship of Botany has been conferred upon Dr. Peter, Curator of the Botanical Garden in Munich, and a pupil of the late Professor Robert Caspery.

SCARLATINA IN THE ST. MARYLEBONE SCHOOLS.

THE circumstances of a maintained prevalence of scarlatina in the St. Marylebone Schools, Southall, have been reported on by Mr. Wynter Blyth. During 1887 there were 59 attacks, and in January of this year four more on a mean number of 317 children. During only two months of 1887 was there an absence of the disease, and the main outbreak centred in the period July—October. Considerable sanitary defects were discovered, but these could not be held responsible for the disease; and at the date of Mr. Blyth's inquiry no fault could be found with the milk, either as regards the state of the dairies and cows, or as regards the presence in it of any such micro-organisms as have been alleged to be associated with so-called cow-scarlatina. This absence of disease indications in the milk at the date of the inquiry has but little bearing on the origin of scarlatina some twelve or fourteen months before; but looking at the statistics and dates recorded in the report, there seems reason rather to look upon the affection as imported and then maintained owing to local defects of administration than to any such cause as milk. And, as a matter of fact, there is but little doubt in Mr. Blyth's mind that the successive infections at different intervals were mainly due to the absence

of any proper arrangements for the maintained isolation of the sick. Amongst his recommendations he presses for the construction of an infectious infirmary, and for the heating to boiling point, for at least fifteen or twenty minutes, of all milk consumed on the premises.

FROM the report by Messrs. Crookes, Odling, and Tidy on the composition and quality of daily samples of the water supplied to the metropolis during the month of March, it appears that the condition of the water derived from the Lea did not differ appreciably from that observable during the previous month of the year. In the case of the Thames-derived supplies, however, the occurrence of a more or less flooded state of the river throughout the greater portion of the month was not without some influence, although indeed to no significant extent, on the character of the water. Thus while the mean proportion of organic carbon in the Thames-derived supplies examined during January and February was ·155 part in 100,000 parts of water, the mean proportion in the samples examined during March was ·162 part. All the samples (182 in number), with the exception of two, were clear, bright, and well filtered.

WE greatly regret to have to announce the death, on the 18th inst., after a long illness, of Dr. F. S. B. De Chaumont, Professor of Military Hygiene at the Army Medical School, Netley. We hope to give in our next issue a sketch of the life and work of this distinguished sanitarian.

MR. RICHARD G. HEBB, M.A., M.D. Cantab., M.R.C.P., Pathologist to the Westminster Hospital, has been appointed to the Lectureship on Morbid Histology in the Westminster Hospital Medical School, vacant by the resignation of Dr. Heneage Gibbes.

A COURSE of lectures and demonstrations in dentistry, forming a post-graduate course, will be given at the National Dental College, 149, Great Portland-street, commencing the first week in June.

THE LANCET

Special Sanitary Commission

ON

"SWEATING" AMONG TAILORS AT LIVERPOOL AND MANCHESTER.

(*Concluded from p. 742.*)

MANCHESTER is a more important centre for the tailoring trade than Liverpool, and here also the "sweating" system has been developed on a much larger scale. The journeymen tailors have so far understood these facts that they have made Manchester the head-quarters of the Amalgamated Society of Tailors. Further, the tailors have themselves instituted a special inquiry into the sweating system, and visited a hundred and forty-six different places in Manchester, where they found about eight hundred persons, male and female, working under this system. But there were many workshops which they were not able to discover. It is no easy matter to find out the right address. The sweater often seeks to conceal himself from all except those from whom he obtains work. Some also refused to admit the members of the tailors' inquiry committee. Taking all these facts into consideration, the tailors conclude that, apart from the 800 actually seen by them to be working under the sweating system at Manchester, there must be from 500 to 600 more who have actually escaped their observation. Then there are in Manchester, as in Liverpool, two other branches of the trade—i.e., the home workers and the workers for the "order shops." The trades unionists belong for the most part to the latter category, and for the town of Manchester are estimated in round numbers at 600 members, and there are some 200 more members in the outlying districts. If the trade were thoroughly organised, the union for the Manchester district should be some 2000 strong. Then, apart from these 2000, who represent the *élite* of the trade, there are the women tailoresses and those who work for the sweaters; so that altogether there are 4000, perhaps even 5000, persons who are engaged in tailoring at Manchester.

The rate of wages was fixed by the Master Tailors' Association, in 1866, at 6*d.* per hour, the same as in Liverpool. The position has not improved during the twenty-two years that have now elapsed since the masters imposed these conditions, in spite of the protests of the men. On the contrary, the development of the sweating trade has helped to reduce the rate of wages, even where sweating is not practised; and, if trades unionists cannot maintain their wages, it stands to reason that the unorganised sweaters' victims are in a still more helpless position. In 1866, there were forty master tailors at Manchester in association. Since that date, half this number have fallen off and no longer pay according to the tariff which they themselves imposed. They only pay 5½*d.* per hour for alterations and 4*d.* for new garments. It need scarcely be remarked that the question of wages is intimately connected with the preservation of public health. If clothes are to be made up in healthy surroundings, there must be money enough to pay the necessary rent. In Manchester, as in Liverpool, the ideal wage, under the present rate, would be equal to 36*s.* per week of seventy-two hours. Tailors calculate that it requires thirty hours to make a frock coat; then there are two hours for trying it on; an hour for braiding; more time for extra pockets &c., making in all forty hours and a half; so that, according to the masters' "log" of 1866, the journeyman tailor should receive £1 0*s.* 3*d.* But in Manchester even the better class master "sweaters" will offer to do all this for 9*s.*; and, naturally, the workpeople he employs get much less, since it is out of the 9*s.* that he "sweats" his profit. A vest, at 6*d.* an hour, should be paid, for making, from 5*s.* 6*d.* to 7*s.* 6*d.* The master sweater, who employs female labour, will undertake to do the work for from 2*s.* to 3*s.* 6*d.* The making of trousers should cost also from 5*s.* 6*d.* to 7*s.* 6*d.*, but the sweater gladly contracts to make trousers at 3*s.* each, and these are the terms of what might be considered as, comparatively speaking, respectable sweaters. There are numerous sweaters who work at even cheaper rates. In the face of such competition, the difficulty of maintaining what might be deemed a reasonable rate of wages is indeed great, and the tailoring trade of Manchester is now completely honeycombed by sweaters.

Manchester, as an abode for sweaters, possesses some notable advantages over London. The town is comparatively new; the streets are therefore wider, and there is more air and more light. Further, it so happens that the greater number of Jew sweaters have settled in the district of Strangeways, where they have found houses in some instances built for an altogether different and higher class of tenants. Somehow the higher-class tenants did not think fit to live in this quarter, and this, so far as public health is concerned, is a fortunate circumstance, for thus many of the Manchester sweaters are located in a better class of houses than those generally occupied by the sweaters of, for instance, London or Liverpool. Nevertheless, grave sanitary defects exist. The sweating dens we inspected in Manchester, though sometimes possessing the advantages we have mentioned, did not in any way reconcile us to the evils of the system.

Our first visit was to a garret situated immediately over a stable. We penetrated a loft by means of a contrivance which we hardly know whether to regard as a staircase or as a ladder. There was certainly an ample supply of light, but the place was cold, draughty, and dirty. Mud had accumulated in a corner where a bucket of water is kept for damping the cloth. The paper was falling off the walls, dirt lay thick on all sides, and cobwebs hung from the ceiling. Though this garret has been used as a sweating shop for two years, the landlord has made no repairs, and the tenant apparently has never attempted a thorough cleansing.

At the back of the stable, under this loft, and on the

ground floor, is another tailor's establishment. Here there was not such a good light. The ceiling was black with soot, and at one end there was a huge pile of dust, dirt, and scraps of cloth, which was about 3ft. wide, 12ft long, and 16in. deep. There were twelve men and women working here, and eight in the garret above the stable. Both these workshops had access to a closet in the yard, which was also used by the stablemen and by five people inhabiting a house joining on to the same yard. At the lowest computation, thirty persons used this one closet, and when work is brisk the number must be much greater. Under such circumstances, we were not surprised to find the closet in a filthy condition, with soil on the seat. Yet this was the only accommodation available for the rough stablemen, the numerous foreign Jews, and the young and delicate females who work at the tailoring.

The next workshop, situated in another street, was large and lofty, but dirty. Here we found men and women engaged making cutaway jackets for 1*s.* 10*d.* each. They were made of printed cloth and the commonest lining, and would be sold to the public at a retail price of 13*s.* each! There is not so much fault to find with this workshop as with its surroundings. On the ground floor, immediately below, is a rag-sorters' work-place. This is a very large room, but all the portion nearest to the wall, where there is but a feeble light, is taken up by huge bales of rags. These are opened under the windows, so that the foul dust therefrom reaches the yard more easily, and can readily be blown into the tailor's work-room immediately above. At the time of our visit, nine persons were busily engaged sorting these rags. They receive 6*s.* a week pay, and are themselves dressed in tatters. We saw fragments of dirty old clothes sorted, the better pieces of cloth torn off, each operation creating a cloud of dust. In the yard there was one closet, locked up, the key being kept by the tailor above, so that the rag-sorters had no closet. In answer to our question, they stated they went to a private house in a neighbouring street, but, judging from the filth in the yard, it was very evident they did not always take that trouble. By the side of the closed closet door, in a little wooden recess, there was a rusty, broken, iron urinal, and on the ground a heap of fæcal matter and pools of urine formed in indentures of the black earth. A great portion of the remaining part of the yard was covered with refuse of every description, broken bottles, brickbats, cinders, pieces of cloth, rag, paper, old shoes, &c., all at the mercy of every gust of wind, and situated within a few yards of hundreds of garments which would soon be taken out for sale and distributed in innumerable shops. The yard was unprovided with water, and apparently innocent of the scavenger's visits. The property is so neglected that in an iron chimney running outside the wall there was a great hole some eighteen inches long. The smoke therefore escapes against the wall instead of above the roof.

In the same street we entered a workshop established in a private dwelling swarming with children. Seven persons here worked in what had been a small front bedroom; but their work was declared to be very slack. In better seasons the overcrowding was much greater.

As a contrast we now entered a huge building which had formerly been an hotel. This was let out into a great number of small tenements, which were nearly all converted into workshops, combined in some instances with dwellings. One was occupied by a job printer, another by a bookbinder, but the majority were held either by sweating tailors or by rag dealers. In what had been the kitchen of the hotel we counted seventeen tailors at work, and observed the notice on the wall that showed it was under the Factory Act inspection. But close by there was a small room, that might be passed over as a private room, where four girls were working. These tailors shared with the tenants of another apartment, who numbered seven persons, one single closet, situated in a dark passage, very dirty, and totally devoid of ventilation. The other closets in this house were in a deplorable condition, and the mixing of various trades, some of them notably unwholesome, such as the rag trade, in a house that had never been built for any such purpose, would naturally produce an unhealthy state of affairs. This should not be tolerated.

Close by there are a number of small dwelling-houses or cottages where the front bedrooms or the parlours have been converted into workshops. In one bedroom we saw four girls at work, two of them almost children. It was very hot and close, there was a smell of sulphur from the coke burnt to heat the pressing-irons, the surroundings were dingy, and an old man was watching the girls work so that they should not drop a thread or lose a moment. In another house only buttonholes and felling were done, and here there is good reason to believe a case of infectious disease occurred a few months ago. In a third house the front bedroom was entirely devoid of furniture, the tailors were all squatted on the dirty floor, and worked unconcernedly on the worn-out boards amid the dust of ages. Then we entered a large, bright, clean workshop where some twenty girls were busily at work. Even here, however, there was a grave defect. A sink is placed in a dark recess under the stairs, and the moisture on the floor gave off a characteristic odour, and testified to filthy habits and reprehensible neglect.

In a sort of court leading from a small street we found two sweaters who had a very extensive tailoring trade. It is true that in the workshop of one we counted only seventeen workers and in the other fifteen, but we happened to call on a morning when work was very slack. The workshops were large enough, had plenty of light, but were deplorably dirty. In the yard there is only one closet, and this is used by the people connected with both the workshops—namely, on the morning of our visit, by thirty-two persons, men, women, and girls. On other occasions, the neighbours assured us, there were as many as forty people employed by the sweater who on this morning had only seventeen assistants. The closet was in a dilapidated and disgusting condition, with soil on the seat, and altogether unfit for use. Nor is there any excuse for such a state of affairs. The yard is large. It would cost but little to build two or three more closets. In the common lodging-houses, where tramps, beggars, and thieves live, the law insists that there shall be one closet for every twenty persons. But here, where there are at times sixty or more men and young women, whose only fault is that they are too industrious and work too long and for too little, only one closet is provided. Nor is this all. Above one of the tailors' workshops is a cloth cap manufactory, where forty, sometimes fifty, persons, for the most part young girls, are employed. These all use one single closet placed under the stairs, on the same level as the tailors' workshop, from which the closet is only separated by a wooden partition. Consequently, and especially during the summer, the tailors are invaded either by evil odours or an overpowering smell of disinfectants. This single closet for so many workpeople, and its most unsuitable position, is a source of constant nuisance. At least three more closets should be built for the accommodation of these three workshops.

In a small dwelling-house, where the partition between the front and back room had been removed, we found eight men and four women working, and, strange to say, an English journeyman tailor in their midst. As a decrepid Polish Jew, about 4 ft. high, came and squatted down to work by his side, the English tailor exclaimed, "Behold the British workman!" This satirical allusion to the way in which the trade is slipping out of English hands was certainly very appropriate. It is, unfortunately, not merely the foreign workmen, but dirty habits foreign to our ideas of salubrity, that are being introduced in our midst. This room, for instance, was abominably close, hot, and malodorous, and yet the master sweater declared he would undertake to make in this small workshop no less than 300 coats in two months. There was a tiny room on the stair landing used as a bedroom, and the bedding was hanging over the balustrades, where it was brought in connexion with the clothes the tailors were making. A few steps lower down there was the dinner cooking in the kitchen, and it was impossible to say where work ended and domesticity commenced. Other houses in this neighbourhood were in a dilapidated insanitary condition. Altogether it was a wretched quarter. In another very poor street close by we were glad to note that several dwelling cottages, which had been used as tailors' workshops, were no longer employed for that purpose, the tailors having found better accommodation in abandoned warehouses or barns. On the other hand, in a street where there are a large number of common lodging-houses, frequented by tramps and characters of the lowest type, we found a very large shop where a great quantity of tailoring work is done for respectable firms. There were also some rag dealers close at hand. Tailors, we maintain, should choose with care the neighbourhoods where they purpose making articles that are destined to be worn by

persons liable to contract disease. It is only natural to expect that tailors should be more prudent in this respect than members of other trades less likely to convey infection.

After this we came upon another large house let out into numerous tenements, which for the most part were used as workshops. Altogether there were nine workrooms, some occupied by dressmakers, others by mantle-makers, and there was a sweating tailor in the garret. But one closet was provided for all these various tenants. The floor of the tailor's room was worn away and covered with wooden patches. The coke was strewn carelessly on the floor, and also a large quantity of paper, dirt, and refuse, gathered out of the other workshops, and which the tailor intended burning on his fire from motives of economy. In the meanwhile the refuse collected from the neighbours was freely mingling with the clothes which were in process of manufacture.

We also visited the houses of a few home workers. Their rooms were in some instances of microscopic dimensions, and the surroundings miserable in the extreme. Here and there they were only cellar dwellings. One room measured 9 ft. by 10 ft. 4 in. The ceiling and floor were giving way, and covered with soot and dirt; and yet here a man and his wife slept, cooked their meals, and made clothes. In another similar house our inquiries were somewhat baffled by the fact that both the tailor and the tailoress present had been indulging so freely in Easter festivities that they failed to understand the motive of our visit. Seeing the misery of their home and surroundings, we could scarcely be surprised at their seeking forgetfulness in dissipations which even those who are well educated and wealthy cannot always resist. Finally, another home worker slept and worked in a little room surrounded by a numerous family, where the damp was causing the plaster to fall off the walls and the floor was broken in. In the back yard the drainage seemed out of order: damp, wet, and unpleasant odours prevailed. In a word, sanitary supervision of the home workers is as necessary in Manchester as in Liverpool.

In conclusion, and while dealing with the tailoring trade in Manchester, we would earnestly urge that sanitary defects are not limited to the sweater's abode. Some of the highest class of work is done in altogether unsuitable quarters; and, though in these instances the workmen belong to the trade union and receive the best rate of remuneration, the workshops provided by their employers are a disgrace to the trade. We will describe three such places. The first we visited was well furnished with closet accommodation, and there was a separate closet for the use of the women; but the workshop was situated underground. A window 24 in. high, commencing on a level with the street causeway, gave light to this cellar. If this window were opened, persons passing in the street would send the dust from their feet down upon the tailors below. The cellar was so low that it was necessary to stoop on entering. The ceiling was only 5½ ft. above the floor. The room, being of irregular shape, could not be easily measured, but apparently it was about 15 ft. by 15 ft. This gives a cubic capacity of 1237 ft.; and here ten people worked, so that, though in common lodging-houses tramps and vagrants are allowed 300 cubic feet each, these tailors worked in only 124 cubic feet of space for every man. A common lodging-house dormitory has also much better ventilation. With the tailors, however, it was not only very difficult to open the window, but the heat of the pressing irons and the gaslight rendered the air most oppressive. To make matters worse, a shrinking apparatus had been fixed just outside the workroom door. Cloth is placed in a large case, a fire is lit, and from a small boiler steam is discharged into this case. The cloth under the influence of damp and heat gives off stifling, unpleasant, and pungent odours, which, together with the steam, enter the tailors' workshop. Nor was there any systematic method of keeping this place clean; the floors were in great need of scrubbing.

The second workshop we visited of this description was also in a cellar, measuring 15 ft. by 12 ft. and 6 ft. high. Here, in a cubic space of 1080 ft., seven highly skilled tailors were at work. This is equal to 154 cubic feet of air for each. Only the middle portion of a low window, which was on a level with the street causeway, could be opened, and a few weeks ago even this was permanently closed. A great quantity of dirt had accumulated between and under the boards of the floor.

The third and last illustration is not a cellar, but garret workrooms. On entering by a door in a back street that runs behind a resplendent shop, it is necessary to go through a long stone passage. On the left, there is a row of closets that are quite dark, have no windows, but ventilate into the passage. Only one of these closets is at the disposal of the workpeople, and it is frequented by twenty-six men and women. There was soil in front and on each side of the seat. The closet had evidently not been cleaned for a long time. Nothing could be more revolting than the aspect of this place. Passing beyond, we grope our way in another passage leading to the stairs. There is no light, and suddenly the foot sinks in soft, pulpy material, and a fearful choking odour arises. Several flag-stones are missing; rags, paper, dust—in a word, dirt of all description has accumulated here, and, with the aid of damp, is decomposing, and thus produces these surprising exhalations. Then we have to ascend, in the pitch dark, a spiral staircase three storeys high, only 2 ft. wide and devoid of any balustrade whatsoever. The steps are of wood, in places so insecure that they bend to the weight of the foot. Occasional dust, cinders, old bits of rag or cloth, increase the danger of falling,—and an accident, we were informed, did once occur on these stairs. At last, when the garrets were reached, we found three little rooms occupied by tailors, another by tailoresses, and another by two female machinists. Some of the rooms were intensely hot from the pressing-iron, the gas, and the overcrowding; others were intensely cold. In the latter the irons and gas were not required, and yet no fire is allowed for fear of accidents. One of the over-heated rooms contained, to judge from a hasty measurement, 864 cubic feet of space, and eight persons were at work; thus there is only 108 cubic feet for each workman. To ascend so dangerous a staircase, and then to reach so unwholesome and unsuitable a place, is a hardship which only absolute necessity compels the workpeople to endure. Common cattle would be housed in a more suitable manner. The stairs leading down to the dungeons of a mediæval castle are luxurious compared with the black, winding, rickety, steps that lead up to this modern tailor's garret. It is high time that the attention of the authorities and the public should be awakened, and the investigation extended. Sweating in the East-end of London is a great grievance, but there is sweating in Manchester, Liverpool, Leeds, &c., that equally requires reform; and, from a sanitary point of view, the sweaters are not the only culprits. The home workers, and the "order shops," where the highest class and best tailoring work is done, also, and but too often, need inspection and supervision.

THE REGISTRATION OF TRAINED NURSES.

A SMALL association, formed about four years ago to consider and discuss matters connected with hospital management, soon saw the wisdom of directing its attention to attempts at legislation for nurses. The only result of its efforts has been the production of *fiasco* after *fiasco* with ridiculous regularity. For example, last October it issued a circular offering to register any nurse who had had one year's training on payment of half-a-crown. The failure this time was rather worse than usual. Not only did nurses *not* register themselves under such auspices, but most of the matrons of hospitals of any standing who were then connected with it resigned their membership at once. Forthwith, the association appointed what it was pleased to call a "sectional committee" to investigate the subject of registration, and its report appeared in a daily paper on Wednesday, and almost confesses that the investigation has been futile. The committee, it appears, issued a paper containing nine questions to thirty-four nurse-training schools. Only nineteen of these took the trouble to answer at all. To the first question, "Do you consider a general system of registration desirable for trained nurses?" it is stated nine replied in the affirmative, but the remaining ten "*desire to be left alone*"! (*sic*)—an answer which cannot be said to be exhaustive on the subject. After this we are not surprised to read that "some of the answers are simply the individual opinions of the matrons, or of medical superintendents, or of some prominent member of the medical staff of the hospital." Nor is it wonderful that many of the replies are of "doubtful

character" (we trust no "bad language" is meant by this); nor that there was an "entire absence of any reply at all to some questions"; nor that "considerable divergence of opinion" was found to exist. But after all this, after only obtaining nineteen answers, of whom nine approved of registration and ten plaintively besought "to be let alone" by this Sectional Committee, will it be believed that this report is actually sent forth to the public with this remark: "It will, doubtless, attract a great deal of attention as embodying the views of the majority of the nurse-training schools"! Still less will it be believed that the committee absolutely considers the question settled, and announces that registration "would be attended with disastrous results." No wonder the unhappy ten implored "to be let alone." But we must speak seriously even about this ridiculous report. Registration of nurses primarily affects 15,000 nurses, 27,000 medical men, and 37,000,000 of people. Very indirectly and distantly does it affect ten or even nineteen managers of nurse-training schools. The two medical men who have signed this report, and made themselves therefore responsible for it, must know that registration, which is only for nurses who have finished their training, can only secondarily affect institutions where nurses are being trained. These two gentlemen, who have made public what to the lay reader is an authoritative protest against registration, ought to know, if they do not, that the truth is all the other way; that the leaders of the medical and nursing professions are almost unanimous in desiring registration for nurses; and that the British Nurses' Association, founded, by the President of the College of Surgeons and other leading medical men, in conjunction with matrons and lady nurses of numerous hospitals, to obtain a Royal Charter to gain registration as its primary object, was joined in the first few weeks by some hundreds of members, including the matrons of St. Bartholomew's, Guy's, Charing-cross, University College, Middlesex, the Royal Free, and more than a hundred other London and provincial hospitals. We deeply regret that the document should have been issued to the public at all, and still more that it should have been sent forth on the responsibility of two medical men.

MEDICAL APPOINTMENTS IN THE COLONIES.

WE are so frequently receiving communications from correspondents asking questions concerning medical appointments in the colonial and other services, that we have thought it well to print the following information with which we have been favoured by the Colonial Office.

COLONIAL APPOINTMENTS.

In the following colonies, which possess responsible Governments, appointments are made by the governor with the advice of his executive council, and are not authorised or confirmed by any commission from the Crown:—Canada, Newfoundland, the Cape of Good Hope, New South Wales, Victoria, Queensland, Tasmania, South Australia, and New Zealand. Any inquiry as to appointments in these colonies should be addressed to the agent-general of the colony. A list of the agents-general may be found in Whittaker's Almanack. All their offices are in Victoria-street, S.W.

Medical Appointments in the Colonies which do not possess responsible Governments.

1. Medical appointments are from time to time filled up by the Colonial Office in the following colonies:—Jamaica, Trinidad, British Guiana, Windward Islands, Leeward Islands, British Honduras, Fiji, Western Australia, West Africa Settlements, Gold Coast, Lagos, and very occasionally in the Eastern colonies (Ceylon, Straits Settlements, and Hong Kong), Cyprus, Gibraltar, St. Helen, and the Falkland Islands.

It is for the West Indies and the West African colonies that medical officers are chiefly required.

2. The majority of the West Indian appointments involve medical charge of a district, including as a rule the care of a hospital, poor-house, asylum, or other institution, and free attendance on the aged and children.

In West Africa the medical officers are also required to take charge of any hospital, public dispensary, lunatic asylum, or other Government institution at their respective stations, to supervise the sanitation of the district, to perform vaccination, and to give gratuitous attendance to all Government officials, and, in most cases, to the families of such officials also.

Passage money on first appointment and leave of absence on half-pay (in case of sickness, or after six years' service, if the medical officer has given satisfaction in the discharge of his duties) are granted to medical officers under the colonial regulations, and with regard to pensions, they are usually on the same footing as other Government servants, but in cases where private practice is allowed, the rule is that they are not entitled to pension.

3. The following is a short account of the appointments in the separate colonies:—

Jamaica.—The appointments, forty-nine in number, are mainly district appointments, with private practice allowed; the salary paid by Government varies from £150 to £250 per annum, and in most cases is £200. New-comers are, in some cases, attached for a while to the public hospital in Kingston, and given an allowance at the rate of £200 per annum, but not permitted to undertake private practice. No pension is given, but there is a Civil Service Widows' and Orphans' Fund, established by law, to which all medical officers are obliged to subscribe at the rate of 4 per cent. on their salaries.

Trinidad.—Twenty-six appointments. Officers are appointed in the first instance on one year's probation as supernumeraries. They receive a salary at the rate of £300 per annum, with furnished quarters, and are usually attached to the Government Hospital; the salary assigned to the district appointments, to which they are promoted as vacancies occur, is £300, which is increased to £400 and upwards by various allowances for horse, house, or otherwise. These posts carry the right to private practice. After ten years' service an officer is given an additional personal allowance at the rate of £100 per annum.

British Guiana.—Forty-five appointments. Officers are appointed on two years' probation as supernumeraries, and are paid a salary at the rate of £300 per annum with quarters, without the right to private practice. After serving for two years, if appointed to the permanent staff, the officer will receive £400 per annum, rising by increments of £25 annually up to £500 per annum. A Government medical officer on being appointed to a district, and a supernumerary on being appointed to act in charge of a district, will receive at the rate of £500 per annum, but will not receive any increments thereto until entitled to such increments by length of actual service. Every medical officer appointed to a district or to act in charge of a district will receive a travelling allowance at a rate varying from £100 to £150 per annum as the extent of the district may require. He is allowed private practice. The Government medical officer in charge of the Public Hospital in Georgetown and the Lunatic Asylum in Berbice is debarred from private practice, and receives in lieu thereof an allowance not exceeding £200 per annum, as may be determined. The Government medical officer in charge of the Public Hospital in New Amsterdam or of the Leper Asylum, if debarred from private practice, receives an allowance varying from £50 to £150 per annum, as may be determined. No more than £30 is allowed for passage money. There is a Widows and Orphans' Fund in the colony to which all Government servants are compelled to subscribe at the rate of 4 per cent. on their salaries.

Windward Islands (Grenada, St. Lucia, St. Vincent, Tobago).—The twenty-three appointments are, with few exceptions, district appointments, with the right to private practice attached. The salaries paid by Government vary from £200 to £400, with allowances in certain cases.

Leeward Islands.—The twenty-two appointments are of the same nature as in the Windward Islands; the salaries vary from £150 to £400 per annum, but in most cases the pay is £250. As a rule £30 only is allowed for passage money. The medical officers receive fees for successful vaccinations, post-mortem examinations, attendance and giving evidence at courts of justice, certificates of lunacy, and, in the larger islands, for burial certificates. They are also allowed private practice.

British Honduras.—There are four medical appointments, in all of which private practice is allowed; the pay is respectively $500, $1000 (2), and $250. The colonial surgeon and district surgeon are public vaccinators, and as such receive 31½ cents for every successful case effected within a radius of three miles of the court house of the place in which a district magistrate resides, and if beyond that radius 50½ cents.

Fiji.—There are at present eight medical officers, of whom the senior medical officer receives £350 per annum and £50 for house allowance, the others receiving £300 per annum and £50 for house allowance, with private practice. No system of pension is as yet established.

Western Australia.—Occasionally medical officers are sent out from England at the request of the governor. They are paid from £100 per annum with private practice. No pension rights are guaranteed; it is the usual practice to allow £100 for passage money on first appointment.

West Africa Settlements, including Sierra Leone and Gambia.—At Sierra Leone there are four Government medical officers, who are allowed to take private practice. The colonial surgeon receives £500, with £91 5s. travelling allowance. Three assistant colonial surgeons, one at £300 and two at £250; two of these receive £45 12s. 6d. travelling allowance. The senior is in charge of the lunatic asylum, incurable and small-pox hospitals at Kissy. One is stationed in Freetown and the other in Sherbro.

At the Gambia there are two medical officers, paid at the rate of £400 and £300 per annum, with private practice.

Gold Coast.—The assistant colonial surgeons (ten in number) are paid at the rate of £400 per annum, rising by triennial increments of £50 to £500, with private practice. The pay of the colonial surgeon is £800, rising to £1000 by £50 per annum, with consultation practice only.

Lagos.—The two assistant colonial surgeons receive the same salaries as those at the Gold Coast. The colonial surgeon is paid £400, rising to £500 per annum, with £200 allowances. Private practice is allowed in all three cases, and free quarters, or allowances in lieu thereof, are granted.

N.B.—The special rules as to leave and pension in the case of Government servants on the west coast of Africa apply also to medical officers.

Ceylon.—The pay of the deputy assistant colonial surgeons (four at present) who are mainly recruited from among gentlemen born in the island, but possessing English diplomas, is at the rate of rs. 1500 per annum. The (twenty-four) assistant colonial surgeons are paid at a rate rising from rs. 3000 to rs. 5000 per annum, and the (four) colonial surgeons at a rate rising from rs. 6000 to rs. 8000 per annum. Private practice is allowed to the subordinate officers, but the colonial surgeons may take only consultation practice. In the branch of the service established for the medical care of labourers on the coffee and other estates, there are at present three superintending officers, paid at a rate rising from rs. 5000 to rs. 8000 per annum; seven district medical officers, paid at a rate rising from rs. 1500 to rs. 2500 per annum, and eight medical assistants, paid at a rate rising from rs. 1500 to rs. 2000 per annum. The district medical officers are allowed private practice and the superintending officers consultation practice. There is a

Widows and Orphans' Pension Fund, to which all permanent Government servants are called upon to subscribe at the rate of 4 per cent. on their salaries.

Straits Settlements.—The pay of the (seven) different medical appointments is not uniform in value, but the normal salary of a colonial surgeon may be said to be at the rate of $2400 per annum, private practice being also allowed.

Hong Kong.—There is a colonial surgeon, paid at present at the rate of $2880 per annum, and allowed private practice; he receives $288 per annum for conveyance and $864 per annum as *ex-officio* inspector of the Lock Hospital; a superintendent of the civil hospital, paid at the rate of $3000 per annum, and provided with quarters, but not allowed private practice; a health officer and medical inspector of emigrants, paid at the rate of $2000 per annum, with the right to private practice; a resident surgeon of the Lock Hospital, paid at the rate of $1800 per annum and provided with quarters, but not allowed private practice.

Gibraltar.—The port surgeon receives £150 per annum and has private practice. There are also three district medical officers, two with £70 and one with £30 per annum; all are allowed private practice and receive about £25 each per annum as public vaccinators. The visiting surgeon of the civil prison and lunatic asylum receives £30, and the officer of health to the Sanitary Commissioners £100.

Cyprus.—There is a chief medical officer, paid at the rate of £309 per annum; and two district medical officers, paid at the rate of £250 per annum; all enjoying private practice. These are the only medical appointments in the island which are open to English candidates.

St. Helena.—The colonial surgeon is paid at the rate of £200 per annum, with private practice, and £30 horse allowance.

Falkland Islands.—There are two appointments, one of which is paid at the rate of £300 per annum, and the other at the rate of £200 per annum. Private practice is allowed in both cases.

4. In addition to the ordinary medical appointments in these colonies, vacancies also occasionally, though very rarely, occur for which specialists are required—as, e.g., to take charge of a lunatic asylum;—and the particulars of chief medical officer in some of the larger colonies have not been given, as the headship of the Medical Department in such colonies, requiring administrative as well as professional qualifications, is not reserved to the ordinary medical staff, but is often filled up directly from the outside.

5. All applicants for medical employment in the colonies must be between the ages of twenty-three and thirty, and must be doubly qualified; preference will be given to those who have held hospital appointments as house-physicians and house-surgeons; certificates of moral character and of sobriety will be required, and every officer before being appointed will be medically examined by one of the consulting physicians of the Colonial Office—Dr. Gage Brown, 88, Sloane-street, London, S.W.; Sir D. S. Maclagan, 28, Heriot-row, Edinburgh; and Dr. Hawtrey Benson, 57, Fitzwilliam-square, Dublin.

6. Applications for medical employment in the tropical colonies from persons in the United Kingdom must be addressed to the Private Secretary, Colonial Office, Downing-street, S.W., during the month of April in each year, and notices to that effect will be posted up early in the year in the leading hospitals and medical schools of Great Britain and Ireland. Out of the total number so applying, a list of candidates will be made who will be eligible to fill any vacancies which may occur during the year, but no promise whatever can be held out that candidates will eventually receive an appointment.

In the course of the last year, 1887-88, there were in all fifteen vacancies to which appointments were made from this country. They occurred in the following colonies: British Guiana, British Honduras, Falklands, Gambia, Gold Coast, Hong Kong, Straits Settlements.

MEDICAL TRIAL.

TIDY *v.* BRENTFORD BOARD OF GUARDIANS.

JUDGMENT was given in this action at the Brentford County Court on the 13th inst. The plaintiff is the district medical officer for the Brentford Union, and sued the defendants for £4, the regulation fees for attendance on five confinements, and £1 1*s.* for supplying a special truss. The judge decided that in the absence of orders from the guardians for the guidance of the medical officer he was justified in continuing his attendances, if necessary or proper, and also upon the confinements, and that the sanction of the board of guardians to such allowances ought to be presumed under all the circumstances of this case. With regard to the truss, there was, his Honour remarked, no evidence before him of any special agreement between the plaintiff and the defendants as to the supply of "medical appliances," and, in the absence of such agreement, a truss, being "a medical appliance," is included in the term "medicine," in respect of the supply of which the plaintiff receives a fixed salary. If he could get judgment, then it would be for £3 10*s.* only in respect of the attendances; but he could not help doubting whether all the material facts of the case had been placed before him, and also whether, having reference to the numerous and complicated articles contained in the Poor-law Orders, he had taken a correct view of those which were in evidence. If either party gave a week's notice, he would give the case a further hearing, but otherwise he entered judgment for the plaintiff for £3 10*s.*, and certified for costs on the scale above £20, as he considered the question litigated to be both "of importance to a class of persons" and also "of public interest."

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Forfar.—In this burgh and parish there were in August last the beginnings of an outbreak of enteric fever, which gave indications of leading to a considerable spread. Water being suspected as the cause, a sample was sent for analysis, but nothing deleterious could be discovered. Probably no harm was in this case done by any such trust as may have been placed in the value of chemical analysis for the purposes to which it was put, but, in face of the overwhelming evidence which the medical officer of the Local Government Board adduced in his annual report of 1881 as to the impotence of chemistry to discover evidence of enteric fever stools purposely added to potable water, it may be hoped that, when chemical analysis is resorted to in such cases, the object and the limited value of the analysis are made clear to the public. The milk, being next examined, came very distinctly under suspicion, and precautionary measures being adopted to prevent further contamination at the dairy, the outbreak came to an end. The occasion is taken by Dr. W. F. Murray to point to the need of compulsory notification, so that such occurrences may be early ascertained, and probably checked in their beginnings. The annual death-rate for the burgh during 1887 is given as 15·4 per 1000 persons living.

Wem Rural District.—Some definite improvement in sanitary progress seems to be annually recorded from this district, and this year a further step has been taken towards securing a wholesome water supply in the village of Shawbury; progress has also been made in dealing efficiently with the manure and refuse of the district. Cases of overcrowding are dealt with, the common lodging-houses, bakehouses, and offensive trades are kept under supervision, and systematic inspection of the district is maintained. The death-rate during last year was only 13·6 per 1000, this being, according to a table prepared by Dr. Giles, the lowest but one recorded for ten years.

Bilston Urban Authority.—The story of small-pox and isolation in this district is not very creditable to its sanitary administration. Hospitals for infectious diseases are notoriously of use only in so far as they are maintained in readiness for the immediate isolation of first attacks. But in Bilston the hospital is evidently kept shut up, and unprepared for its most important work; for on the appearance of small-pox further cases had apparently to be waited for before the medical officer of health felt he could urge the *re*-opening of a closed establishment, and before this could be carried out still further cases had appeared. The first case was heard of on November 22nd, and on December 13th a first case was admitted. We hope the sanitary authority do not keep their fire station and engines in the same state of unpreparedness. The cottage hospital was used for typhus, all cases needing isolation being removed as soon as discovered; and it may be that the existing faulty arrangements recorded as to small-pox are really due to a transition stage between a temporary use of cottages and the construction of a proper hospital. Measles caused forty-two deaths, and the question of school closure arose; but after considering all the local circumstances, Dr. T. Ridley Bailey evidently feared the possibility of a greater mingling with affected children if that step were adopted than was taking place through school agency, and he declined to advise the step. Shortly afterwards the disease abated. Owing mainly to measles, the zymotic death-rate rose to 3·39 per 1000 living, the general death-rate being no less than 25·3 per 1000.

Walthamstow Urban District.—In this district the general death-rate for 1887 was 15·6 per 1000, but that from zymotic diseases reached 4·15 per 1000. The excess of this latter rate was largely due to no less than fifty-two deaths from diphtheria, and Mr. Shadwell, though he devoted much time to an investigation of its origin and of its persistency in the district, regrets that the results obtained were not so satisfactory as he could have wished. School attendance certainly favoured the spread of the disease, and the state of at least one school as to aerial impurity must probably have still further aided in the diffusion. Ordinary nuisances, and also blocked and improper sewers, were in places dis-

covered, but no definite connexion could be traced between these conditions and the incidence of the disease. Affections amongst the lower animals and milk infection were also set aside, but it is probable that we may shortly hear more of this wide distribution of diphtheria. Great complaint is made as to refuse removal, the case being one in which the authority, instead of doing the work themselves, delegate it to a contractor. A constant service of water is also needed, and Mr. Shadwell believes that in Walthamstow, as elsewhere, such a system would lead to a less consumption than follows on the intermitting system.

Southend Urban District.—Estimating the population of this urban district at 10,500, Mr. Phillips, the medical officer of health, records a death-rate during 1887 of 14·5 per 1000, and if visitors are excluded the rate is reduced to 12·0; a result which must be regarded as satisfactory for a locality so largely resorted to for pleasure and health, especially if it is a fairly normal rate. Improvements are stated to be in progress as regards the ventilation of house drains; but unfortunately the modern bye-laws do not enable the authority to exercise control in this matter in the case of houses already erected except on complaint as to nuisance or injury to health. The sewer ventilators are said to be a cause of trouble, and hence ample high shaft ventilators are suggested as an alternative.

Todmorden Urban District.—Much needs to be done as regards drainage in this district, the old drains being to a large extent defective and worse than useless. The blocking of sewers and the need for sewer ventilation are also matters urgently calling for attention; and Mr. Thorp further recommends the adoption of the model bye-laws as to certain of these matters. The annual death-rate from all causes during 1887 was 20·9 per 1000, the birth-rate being 26·4. The death-rate was materially added to by a maintained prevalence of scarlatina, measles, and whooping-cough; and the difficulty of securing early information as to attacks, and of getting the sick into hospital, made it necessary to adopt such measures as school closure.

Spilsby Rural District.—Dr. Walker commences his annual report for 1887 in this district by an account of the infectious fevers that have prevailed; but the only disease causing much mortality was measles, from which 8 deaths resulted, the death-rate from the so-called zymotic group being one of the smallest on record. Disinfectants were freely used, but Dr. Walker does not consider that the circumstances necessitated any recommendation that the cases should be removed to a hospital. Public scavenging has been commenced in the district, and it is to be hoped that it may be continued and extended. A commencement has also been made in providing the town of Wainfleet with a proper system of drainage, and a large amount of current nuisance removal has been attended to. Bye-laws as to the inspection of cattle in dairies, for prescribing the sanitary conditions of dairies and cowsheds, for securing cleanliness in connexion with the sale of milk, and as to taking precautions against milk infection, have been adopted; and the dairies are properly inspected. The general death-rate for 1887 was 14·8 per 1000 living.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6477 births and 3952 deaths were registered during the week ending April 14th. The annual rate of mortality in these towns, which had been 21·5 and 19·9 per 1000 in the preceding two weeks, rose last week to 21·9. During the thirteen weeks of last quarter the death-rate in these towns averaged 22·1 per 1000, and was 1·9 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 16·8 in Portsmouth, 17·7 in Huddersfield, 17·8 in Sunderland, and 18·2 in Birkenhead. The rates ranged upwards in the other towns to 26·8 in Preston, 28·1 in Blackburn, 30·0 in Wolverhampton, and 34·9 in Manchester. The deaths referred to the principal zymotic diseases, which had been 319, 388, and 371 in the previous three weeks, declined again last week to 358; they included 172 from whooping-cough, 46 from scarlet fever, 38 from diarrhœa, 33 from diphtheria, 21 from "fever" (principally enteric), and 16 from small-pox. These zymotic diseases caused the lowest death-rates in Sunderland and Preston, and the highest rates in Salford, Plymouth, and Sheffield. Whooping-cough caused the greatest mortality in London, Leicester, Blackburn, and Salford; scarlet fever in Birkenhead, Hull, and Oldham; measles in Nottingham and Plymouth; and "fever" in Derby. The 33 deaths from diphtheria in the twenty-eight towns included 19 in London, 4 in Liverpool, and 2 in Sheffield. Small-pox caused 11 deaths in Sheffield, 3 in Blackburn, 1 in Bristol, and 1 in Manchester, but not one in London or in any of the twenty-three other large provincial towns. The Metropolitan Asylum Hospitals contained 15 small-pox patients at the end of last week, against 15, 9, and 8 on the preceding three Saturdays; the Highgate Small-pox Hospital contained 2 patients at the end of last week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 1083 on Saturday last, against numbers declining steadily in the preceding nineteen weeks from 2764 to 1119; the 100 cases admitted to these hospitals during the week showed, however, an increase of 29 upon the number in the previous week. The deaths referred to diseases of the respiratory organs in London, which had been 460 and 419 in the preceding two weeks, rose again last week to 444, but were 18 below the corrected average. The causes of 104, or 2·6 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Newcastle-upon-Tyne, Sunderland, Oldham, and in five other smaller towns; the largest proportions of uncertified deaths were registered in Huddersfield, Salford, Hull, and Birmingham.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 23·7 and 21·8 per 1000 in the preceding two weeks, further declined to 20·8 in the week ending April 14th; this rate was 1·1 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns ranged from 14·7 and 16·9 in Leith and Greenock, to 23·5 in Aberdeen and 30·4 in Perth. The 526 deaths in the eight towns showed a further decline of 25 from the numbers returned in the previous two weeks, and included 20 which were referred to whooping-cough, 9 to diarrhœa, 8 to "fever" (typhus, enteric, or ill-defined), 5 to measles, 4 to scarlet fever, 3 to diphtheria, and not one to small-pox; in all, 49 deaths resulted from these principal zymotic diseases, against 45 and 51 in the preceding two weeks. These 49 deaths were equal to an annual rate of 1·9 per 1000, which was 0·1 below the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 17 and 26 in the preceding two weeks, declined again last week to 20, of which 11 occurred in Glasgow, 4 in Edinburgh, and 2 in Aberdeen. The 9 deaths attributed to diarrhœa showed an increase upon recent weekly numbers, and were 2 above the number in the corresponding week of last year. The 8 deaths referred to "fever" also exceeded the number in any recent week, and included 5 in Glasgow. The fatal cases of measles, which had been 4 and 10 in the preceding two weeks, declined again last week to 5, of which 3 occurred in Glasgow and 2 in Edinburgh. The deaths from scarlet fever and diphtheria scarcely differed from the numbers in the previous week; 2 from scarlet fever occurred in Glasgow, and 2 from diphtheria in Edinburgh. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 144 and 142 in the preceding two weeks, further declined last week to 126, and equalled the number in the corresponding week of last year. The causes of 67, or nearly 13 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been 31·2 and 27·8 in the preceding two weeks, further declined to 27·6 in the week ending April 14th. During the thirteen weeks of last quarter the death-rate in the city averaged 31·6 per 1000, the mean rate during the same period being 22·0 in London and 22·1 in Edinburgh. The 187 deaths in Dublin showed a further decline of one from the numbers in recent weeks; they included 7 from whooping-cough, 3 from "fever," 3 from measles, 1 from scarlet fever, 1 from diarrhœa, and not one from small-pox or diphtheria; in all, 15 deaths resulted from these principal zymotic diseases, against 20,

15, and 19 in the preceding three weeks. The annual death-rate from these zymotic diseases was equal to 2·2 per 1000, the rate from the same diseases being 2·2 in London and 2·4 in Edinburgh. The fatal cases of whooping-cough, which had been 8 and 4 in the previous two weeks, rose again last week to 7; while the deaths from "fever," scarlet fever, and measles showed a decline. The deaths of elderly persons showed a further decline from the numbers in recent weeks; while those of infants had slightly increased. Six inquest cases and 4 deaths from violence were registered; and 63, or more than a third, of the deaths occurred in public institutions. The causes of 20, or nearly 11 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

"PERMANENT" v. "TEMPORARY" HOSPITALS FOR THE TREATMENT OF INFECTIOUS DISEASES.

To the Editors of THE LANCET.

SIRS,—I have been much interested in the correspondence on this subject which has lately appeared in your columns. Perhaps I may be permitted to state my opinion, which is founded on an experience of more than twelve years' residence in the City of Glasgow Fever Hospital, Belvidere. It may be explained that Belvidere is a little estate of some thirty acres in extent, situated just within the municipal boundary, adorned with trees and flowers, and enjoying a wonderfully pure atmosphere considering its proximity to a large city. It is not necessary in this place to enter into the history of the development of the hospitals at Belvidere (which reflect so much credit on the municipal authorities, on Dr. Russell, medical officer of health, and on Mr. Carrick, city architect). Suffice it to say that when I entered on duty in 1875 the Fever Hospital consisted of wooden wards, double lined, covered with felt outside, and heated by hot-water pipes and open fires. The new Small-pox Hospital pavilions were then in course of construction, and their walls were just rising above the ground; these constituted the first instalment of the *permanent* pavilions built at Belvidere.

This Small-pox Hospital (which is separate and distinct from the Fever Hospital, with administrative department &c. of its own) is built of brick; the blocks are of one storey only, and stand well apart; the flooring is of close jointed oak; the inner walls are coated with Keen's cement; the wards are warmed by hot-water pipes and open fires.

Since the completion of the new Small-pox Hospital the Fever Hospital has undergone a gradual transformation—the old wooden wards being pulled down, and brick pavilions, of the same type as those of the Small-pox Hospital, put in their places. We have now two permanent hospitals, with a total of 540 beds.

The opportunity has thus been afforded me of studying the comparative merits of "temporary" and "permanent" pavilions *worked side by side*, and my opinion is that, while the former were good, the latter are decidedly better. The old wooden wards served their purpose in a fairly satisfactory manner, but they were difficult to keep warm in a severe winter (notwithstanding hot-water pipes, open fires, and double-glazed windows), and in summer they were oppressively hot. From the nature of their structure they were apt to be draughty; and, although this was rather an advantage than a drawback in the treatment of typhus, the same remark does not apply to scarlet fever, measles, and whooping-cough. The wooden walls, with their numerous joints, seemed well calculated to receive and retain infectious matter. The soft wood floors required constant washing, which kept the wards in a steamy, unwholesome condition. And, besides all this, the danger of fire, referred to by one of your correspondents, was always a matter for apprehension and uneasiness. The new brick pavilions, on the other hand, are warmer in winter and cooler in summer than the wooden ones, and they are less apt to be affected by daily variations in temperature—a matter of great consequence in cases of scarlet fever, for example. In some of the wards the walls are oil painted and varnished, but in those last constructed the Keen's cement is simply coated with whitewash or coloured distemper. The latter is the better plan. For instance, if a ward which has been used for measles is required for the reception of scarlet-fever cases, the distemper is washed off and a fresh coat of whitewash or distemper put on. This is more satisfactory than washing oil-painted walls. The hard oak flooring is polished with a mixture of beeswax, paraffin-wax, and turpentine—a cleanly and wholesome method.

It seems clear to me that our present "permanent" pavilions have the following advantages over the old wooden ones. They are more equable in temperature, more comfortable, more easily cleansed and disinfected, and less liable to danger from fire.

I am, Sirs, your obedient servant,

JAMES W. ALLAN, M.B.,
Physician-Superintendent, Glasgow Fever Hospital.

Belvidere, April 17th, 1888.

To the Editors of THE LANCET.

SIRS,—Will you allow me to say, in reply to Dr. Seaton, that I have not found any difficulty in disinfecting the wards of permanent hospitals. The essentials of disinfection are, I think, two: (1) That walls, roof, and floors be made of a material which may be scrubbed with soap and water; and (2) that windows be made sufficiently large and numerous to permit of the complete exposure of the ward to "wind and weather." Some recommend the burning of sulphur in an atmosphere of steam; but I do not consider this essential. In support of this view I am able to record the following experience:—

In one of our huts small-pox was treated first, scarlet fever afterwards, then small-pox, and again scarlet fever. The disinfection consisted in exposing the hut to "wind and weather" by keeping the windows open night and day for fourteen days, and in scrubbing the walls, roof, and floor three times with soap and water at intervals of two days. There was no instance in which a scarlet-fever patient contracted small-pox or a small-pox patient contracted scarlet fever.

I agree with Dr. Seaton in his opinion that the "ineffectual separation" of diseases of different kinds in temporary hospitals is not a disadvantage attaching to them of necessity.—I am, Sirs, your obedient servant,

Eastern Hospitals, E., April, 1888. ALBX. COLLIE.

RESORCIN IN CHRONIC PAINFUL ULCERATION OF THE TONGUE.

To the Editors of THE LANCET.

SIRS,—My friend Mr. Giffard of Brighton and I venture to think your readers may be interested in the following case of ulceration of the tongue, which has been seen by us as well as by a good many other medical men:—The patient is a married lady, and the affection was first noticed some fourteen years ago. Treatment of a mercurial character was unsuccessfully employed by various medical men who, from time to time, were consulted. In June, 1886, the affection was characterised by firm indiarubber-like nodules with extensive bases and by deep fissures occupying a considerable part of the dorsum and sides. There was also some ulceration on the dorsum, and the pain was very severe. Sir James Paget was consulted at this time, and he, fearing that the lesions would take on cancerous characters, advised that a slice should be taken off the affected part of the dorsum. This was done, considerable relief following, which, however, proved to be of a temporary character only, as shortly afterwards, in consequence, as the patient believes, of a cold caught on a mountain, the ulceration began to return, and all the old pain with it. The patient then fell into the hands of a homœopath, whose treatment, however, was of a negative kind. The tongue continuing to grow worse, and the patient having given up the homœopath and moved away from the neighbourhood of her former medical advisers, it was suggested to her some three months ago by letter that, before returning to undergo a further operation, she might try the effect of sprinkling a minute quantity of resorcin on the diseased surface. The very first application greatly relieved the pain, and in a few days the tongue, which had been much swollen, returned to its normal size. Now, though the fissures and ulcers are still present, they are described by the patient as looking much more healthy and as being almost painless, on which latter point we may certainly take her

word, whatever doubt may attach to the description of the appearances.—I am, Sirs, yours truly,

Woolwich, April 16th, 1888. THEODORE MAXWELL.

HEALTH IN THE PORT OF LONDON: THE DISINFECTION OF RAGS.

To the Editors of THE LANCET.

SIRS,—In the annotation on the above subject which appears in THE LANCET of the 31st ult., you commend the suggestion of Dr. Collingridge, medical officer of health to the Port of London, as to the advisability of establishing a regulation that all rags entering this country should be subjected to disinfection, with the view of destroying their power of conveying infectious disease. In the position of medical inspector for the United States of America at the Port of London, which I have held for the last few years, while cholera has been prevalent in Egypt, France, and Italy, I have given the subject of rag disinfection considerable attention, and the following particulars may, I think, be of interest and utility.

In a report dated August, 1884, addressed to the Consul-General for the United States in London, I pointed out that, in my opinion, the importation of large quantities of rags into the United States from this country was at that time fraught with considerable risk, small-pox being prevalent in London, where quantities of rags were collected and shipped to America, and large quantities of continental rags were being forwarded to London, Hull, and other ports for transhipment to that country; these rags, undergoing no process of disinfection previously to exportation, were, I considered, very likely agents to convey the infection of small-pox or of cholera, then prevalent on the Continent. I also found that the certificates of the shippers that the rags had not been collected in any infected district were unreliable evidence of the safety of their source, and I added that the sources whence rags are collected are so difficult to trace, and during epidemics of infectious disease rags are so likely to come from infected localities, it appeared to me that unless reliable evidence were produced, showing that they had been properly disinfected, it would be a wise precaution to prohibit the importation of rags into the United States, at least for a time. This report was forwarded by the Consul-General to the United States Government authorities, who had already had the subject under their consideration and action with regard to the disinfection of Egyptian rags, and on Sept. 1st, 1884, an order was issued prohibiting the importation of rags into the United States for a period of three months, and on Dec. 22nd, a further order was issued by the Treasury Department in the following terms:—

"*To collectors of Customs and others.*—All circulars of the Department concerning the importation of old rags are modified as follows. No old rags, except those afloat on or before Jan. 1st, 1885, on vessels bound directly to the United States, shall be landed in the United States from any vessel, nor come into the United States by land from any foreign country, except upon disinfection, at the expense of the importers, as provided in this circular, or as may hereafter be provided. Either of the following processes will be considered a satisfactory method of disinfection of old rags, and will entitle them to entry and to be landed in the United States upon the usual permit of the local health officer—viz.: (1) Boiling in water for two hours under a pressure of fifty pounds per square inch; (2) boiling in water for four hours without pressure; (3) subjection to the action of confined sulphurous acid gas for six hours, burning one and a half or two pounds of roll brimstone in each 1000 cubic feet of space, with the rags well scattered upon racks; (4) disinfection in the bale by means of perforated screws or tubes, through which sulphur dioxide, or superheated steam at a temperature of not less than 330 degrees, shall be forced under a pressure of four atmospheres for a period sufficient to ensure thorough disinfection. Old rags may be landed and stored at such places as may be approved by this department for the purpose of undergoing any of the processes of disinfection before named, and upon the completion of such process to the satisfaction of an inspector of Customs and the local health officer the rags may be delivered to the importer or consignee. Old rags may be subjected to disinfection by either of the said processes in any other country, where this department may appoint an inspector to superintend the same, whose certificate of such disinfection shall be authenticated by a United States consular officer, according to Department Circular, No. 61, of April 22nd, 1884."

In reference to these methods, I may state that the rag merchants of London found the first two, or wet, processes unsuitable, as it was practically impossible to dry the large quantities of rags passing through their hands, and if baled up damp they became rotten. Process No. 3 was found to be the most suitable, and in 1885 the principal rag merchants in London erected disinfecting chambers for the carrying out of this method with rags intended for exportation to the United States. These chambers, after being inspected by myself and found to be in conformity with the regulations, were approved of, the disinfecting process being carried out under the supervision of a United States inspector attached to the Consulate-General, whose permit is then affixed to each bale, and a duly authenticated certificate from that officer accompanies each consignment of rags to entitle them to enter the United States. Similar arrangements were made, I believe, at Liverpool, Manchester, and at several continental towns, whence rags are largely exported to America. With regard to the cost of such disinfection, even if applied to rags generally before they leave the merchant's hands, I think it may safely be stated that neither the rag nor paper trade would be appreciably affected thereby. The chief expense is in the construction of the disinfecting chambers, which under the aforesaid circumstances varied from £40 to £150; the cost of the sulphur used and of the attendant labour and inspection &c. being by no means great; while as a sanitary precaution the measure would doubtless be of decided advantage to public health.

I am, Sirs, yours faithfully,

J. HIGHAM HILL, M.D., F.R.C.S.E.

Bedford-square, April 9th, 1888.

ARMY MEDICAL RESERVE OF OFFICERS.

To the Editors of THE LANCET.

SIRS,—I shall be much obliged if you will allow me through the medium of your columns, to answer some of the numerous queries which are constantly being put to me relative to the Warrant establishing the above reserve.

It has long been felt that the Volunteer Medical Service was not in such a state of organisation as to render it effective as a reserve if ever required, and the Volunteer Medical Association has for some time past urged upon the notice of the authorities the desirability of doing something to place us upon a more satisfactory basis, and in this connexion I should like to say that the Council have every reason to thank the present Director-General; they have always found him ready and desirous of helping in every possible way.

The Royal Warrant, A. O. 56, March, 1888, establishes what did not exist in any sense before—viz., a medical reserve of officers: it is true a reserve of officers existed, but in this no place was found for a medical officer; therefore, from this point of view, the Warrant is, I think, a cause for congratulation. The only objection I have heard urged against it is that the authorities may use it in opposition to the interests of our brethren in the medical staff. I am bound to confess I see not the slightest reason for such a suggestion; the services of the officers of such a reserve can only be called for, in accordance with Rule 4 of the Secretary of State's Instructions, "in times of great national emergency," and then only for home service. The Warrant might have gone farther than it does, and in many respects I wish it had, but I think it would be unwise for us not to show the Government we are really anxious to do what we can to help forward to a successful issue what is unquestionably a movement of national importance, and is, further, a step we have ourselves for some time urged upon their notice. The Council of the Association has taken this view, and although we felt, perhaps, it was not our province to influence Volunteer surgeons in the matter—as, possibly, for reasons of a private nature, it might be impossible for such officers to join,—yet, morally, we agreed to give the movement every support by applying ourselves for commissions.

There can be no doubt that the Volunteer surgeons will form the main support of this reserve, and I can only hope that we shall receive from the War Office every encouragement and help. The Volunteer Medical Service at present

consists of so many units; we have no organisation, and but scanty equipment; whilst many anomalies exist as to rank and the like. All these points have received, and are receiving, the attention of the Council. To our colleagues in the service we appeal, not only to join us and make our organisation as strong as possible, but, in every other way to render such assistance as will make the Volunteer Medical Service in all respects effective.

I am, Sirs, yours faithfully,

WM. ROBT. SMITH, M.D., D.Sc., F.R.S.ED.,
Surg.-Maj. 3rd V. B., Queen's Own (Roy. West Kent Regt.),
Treasurer Vol. Med. Assoc.

Volunteer Medical Association,
26, King William Street, Strand, W.C., April 17th, 1888.

P.S.—I would add that a class has been formed for Volunteer medical officers, in preparation for the proficiency certificate, particulars of which can be obtained at the above office.

IS PHOSPHORUS A CAUSE OF CANCER?

To the Editors of THE LANCET.

SIRS,—Of late cancer has been, so to speak, more before us than ever; following closely on Sir James Paget's address we have had Mr. Haviland's notes on the geographical distribution of cancerous disease in the British Isles, with its indications of increase in cancer mortality, and of lesser mortality in limestone districts; we have had the treatment of cancer by lime salts, notably burned oyster shells, which in a way seems but a likely and fit method of supplying lime, perhaps needed, in districts where it does not so plentifully exist; we have had suggestions as to the almost probability that arsenic may in certain cases aggravate into existence cancerous disease; but we have not had, what I had looked for and hoped for, any suggestion as to the probabilities of any aggravation of the same kind caused by phosphorus. Arsenic has been used for I cannot say how long a period in pharmacy, nor have I at hand the means of referring back; but, in connexion with phosphorus, in the British Pharmacopœias of 1864 and 1867 it existed, "to be used in the preparation of the dilute phosphoric acid," and the only preparations containing phosphorus were the dilute acid and the phosphates of ammonia of lime, of soda, and of iron, the syrup of the phosphate of iron, and the antimony powder. No phosphorus oil and no phosphorus pills in their hundred and one variety were then used to any extent; since then they are *authorised* and used by the million. I have had under observation, which calls for these remarks, cases of epithelioma, which have at earlier periods of life undergone more or less extensive treatment in the form of pure phosphorus in perles or pills. Undoubtedly the use of phosphorus has largely increased during the last twenty years; public, and I believe professional, opinion says that cancer has *pari passu* done the same during the same period. Arsenic I use often, and consider it of inestimable value in its proper place; phosphorus I believe to be a dangerous remedy, and it is certainly one that I can never prescribe, so great is my prejudice to it. I should be glad to hear, either privately or through your columns, any evidence that is likely to be in any way confirmatory of phosphorus aggravation to cancer. The benefit, too, derived from lime salts, as reported, distinctly indicates a possibility, at least, that I am not entirely in the wrong.

I am, Sirs, yours faithfully,

Rochdale, April 16th, 1888. WILLIAM STANWELL.

THE OATHS BILL.

To the Editors of THE LANCET.

SIRS,—I am surprised that no notice has been taken in your correspondence column of the annotation on the above, which appeared in a recent issue. I have repeatedly heard medical witnesses complain of the manner in which they were sworn when giving evidence in court, and of having to kiss a greasy, dirty book. Though apparently a trivial matter, it really is not so, as it cannot be denied in these days, when so much attention is being drawn to media of contagion, that handling and kissing a book in indiscriminate use might be the medium of infection with fever or even syphilis. But nothing can be done in the way of changing this except by an Act of Parliament. Hence, as it seems to me, advantage should be taken of the introduction of the Oaths Bill to have introduced into it a clause changing the present mode of administering the oath in this country to that used in Scotland—viz., with the right hand uplifted and by each witness repeating the words of the oath. This would be more solemn as well as more cleanly.

I am, Sirs, yours faithfully,

Liverpool, April 17th, 1888. FRED. W. LOWNDES.

EARLY VACCINATION.

To the Editors of THE LANCET.

SIRS,—In reference to early vaccination, you will perhaps allow me to state that during the time I was medical superintendent of the Homerton (now Eastern) Small-pox Hospital, five children were born in that institution, all of whom were vaccinated within twenty-four hours of their coming into the world. This was done for obvious reasons, with the result that none contracted small-pox, although living within a few yards of wards, all of which at times were fully occupied, and certainly without producing any ill effects upon either the mental or physical condition of the children.—I am, Sirs, yours faithfully,

WM. GAYTON, M.D.

Metropolitan Asylum Board, North-Western Hospital,
Haverstock-hill, N.W., April 17th, 1888.

DISLOCATION OF THE HEAD OF THE FIBULA.

To the Editors of THE LANCET.

SIRS,—I quite agree with Dr. Thomson in thinking that the tenseness of the biceps tendon is the chief hindrance to the reduction of such cases; and that the first thing to be done is to relax the tendon by flexing the leg on the thigh. In my case the patient did this for himself, and, further, by forcibly extending his leg, he caused sudden tension of the biceps tendon, this pulling on the head of the fibula and doing what Dr. Thomson did in his case by the pressure of the fingers. The difference is merely that between pushing and pulling. I admit that the reduction in my case may have been effected by the pressure of Mr. Battle's thumb, which was on the dislocated head; but I do not think that it was thus effected, as the kick of the patient was quite unexpected, and occurred before Mr. Battle had attempted to reduce it; and also the snap was heard immediately after the kick, and not during it.

I am, Sirs, yours faithfully,

Walton-place, S.W., April 17th, 1888. ASHLEY LEGGATT, M.B.

"HAMMER-TOE."

To the Editors of THE LANCET.

SIRS,—I think that those who have been in the East will agree with me that no case of hammer-toe is ever seen in any people who do not wear European shoes. The entire freedom from crossing of the toes and hammer-toe in Eastern races appears to me to indicate the certainty that all such deformities are produced by the bad shape of our shoes. In the case of an infant born with a deformity of this kind the evil is no doubt hereditary, and the result of pressure of the toes in some ancestor of the child.

I am, Sirs, yours truly,

April 11th, 1888. ANDREW FYFE.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

THE DURHAM COUNTY ASYLUM.

DR. SMITH, the medical superintendent of the Durham County Asylum, has sent in a report to the magistrates on the condition and work of the institution, in which he says: "The year commenced with a population in the house of 606 men and 526 women, and ended with 616 men and 527 women, an apparent increase of only 11 patients; but 100 inmates—50 of each sex—had been sent by the superintendent to board at the Whittingham Asylum, and these may be, for statistical purposes, still considered on the books. The private cases had also been for the most part discharged, and their places occupied by union cases, so that instead of an increase of only 11 there

has been an increase of 130 patients during the year." Dr. Smith remarks upon the overcrowding of the asylum. An immediate increase of asylum accommodation of some sort seems to be urgently required. As matters at present stand, various wards in the asylum are employed for purposes for which they were never intended, and for which they are not structurally fitted. In defiance of the most simple sanitary laws, dormitories are crowded so that other dormitories may be utilised for day accommodation, and in consequence of this, and to guard as much as possible against accidents—which are sure, sooner or later, to occur in overcrowded, improperly constructed asylums,—additional attendants and nurses, both for day and night, are required, at an increased cost to the maintenance account.

THE AIR IN THE PUBLIC BUILDINGS OF NEWCASTLE.

Some interesting and instructive experiments have lately been made into the state of the air in our public buildings when in a crowded state by the North-Eastern Sanitary Inspection Association. The results are not yet complete, but so far go to show a high degree of impurity as regards chemical products and micro-organisms. A force pump mounted on a tripod was employed in the experiments. Ten litre samples of air were drawn into very large test tubes, some of which were coated internally with the nutrient gelatine used for what is known as the dry process for development of micro-organisms. I saw the grown and developed animalcules and moulds, the germs of which were deposited from the pumped-in air of the crowded public buildings, and it was pleasant to think that, although numerous and various, they were of the non-injurious sorts. The secretary of the North-Eastern Sanitary Inspection Association, Mr. R. B. Duncan, put the problem of ventilation as regards large public buildings to me in a very forcible manner by remarking that it is impossible to purify by ventilation any large public building in a short time, and to keep it pure by any mode of natural ventilation. Machinery and apparatus become necessary, and of course this means expense, which, he said, was the great obstacle to efficient ventilation of our crowded assemblies. The directors of one of our notably badly ventilated public buildings hesitated at a probable expense of £700 for the purpose.

HEXHAM.

The inquest on the young man who lost his life by a football accident showed that the deceased was "collared" by two opponents, one of whom lifted him by the loins while the other raised him by the feet, all three falling together, the deceased being undermost. Dr. Jackson of Hexham deposed to the nature of the injury to the spine, and that the deceased told him that in the fall his chin was forcibly bent on his chest. Paralysis from the chest downwards was the immediate cause of death. The coroner, in his remarks, pointed out that "the game should be one of skill rather than one of brute force, but that it appeared from the evidence that the game was played within the rules." Most people, however, will think so much the worse for the rules, and that they should be at once modified.

SERIOUS TRAP ACCIDENT TO A SURGEON.

Dr. Anderson of Seaton Delaval, accompanied by his coachman, was going his customary rounds in his trap, when the horse shied near Cramlington, and the occupants were thrown violently to the ground. Besides being severely shaken and cut, the doctor had his shoulder dislocated; the coachman escaped with slight injuries.

Newcastle-on-Tyne, April 17th.

ABERDEEN.

(From our own Correspondent.)

UNIVERSITY OF ABERDEEN—MEDICAL GRADUATION.

THE graduation ceremony took place at Marischal College on Wednesday, the 11th inst., when seven gentlemen were promoted to the degree of M.D., three had the diploma in Public Health conferred upon them, and twenty-eight received the degrees of M.B. and C.M. One gentleman passed all the examinations, but not having attained the necessary age could not graduate. It was also reported that sixteen gentlemen had passed the first division of the first professional examination; that forty had completed the first professional; and that forty had passed the second professional examination. The graduation supper was held on Tuesday night. Professor Smith Shand occupied the chair, and Professors Stephenson, Hay, and MacWilliam were also present as guests. The summer session commences on Monday, the 23rd inst., and the preliminary examinations are to be held on Friday and Saturday of this week.

THE UNIVERSITY COUNCIL AND THE UNIVERSITIES (SCOTLAND) BILL.

The General Council of the Aberdeen University met in Marischal College on Wednesday, the 11th inst. At the last meeting the Council appointed a committee "to watch over legislation affecting the University," and this committee brought up a report on the Universities Bill. Professor Struthers was convener of the committee, and, in moving the adoption of their report, said that the present Bill "was a decided advance on any measure that had gone before, but it appeared to some of them that it contained the germs of possible evil at some future time." The meeting approved of the powers to be given to the General Council, but considerable discussion took place over the clause where it is proposed to transfer the administration of the property and funds of the University from the Senatus Academicus to the University Court. The meeting by a very large majority expressed approval of the proposed change. With reference to the powers to be given to the commissioners in regard to the increase of the teaching power, the committee considered the clauses in the Bill too indefinite as concerned the method in which this object is to be accomplished, and it appeared to them that the more judicious procedure would be to make it an instruction to the commission in the first place to inquire and report in regard to the subject of the affiliation of any colleges, and also as to the best method of extending the teaching power when required. This recommendation was carried by the casting vote of the Principal against an amendment "that Subsections 9 and 13 under Section 14 be approved of as they stand in the Bill." Professor Struthers then moved: "That a clause be inserted in the Bill giving the commissioners power to regulate the manner of nomination and appointment to professorships in the Universities, and to report to Her Majesty upon the manner of nomination to professorships in the patronage of the Crown." The motion was unanimously adopted.

THE MEDICAL OFFICERSHIP OF HEALTH.

At the monthly meeting of the Town Council, held on Monday, a letter was read from Dr. Craven, Southport, claiming payment of £14 12*s.* 11*d.*, being expenses incurred by him between March 8th and 21st in prosecuting his candidature for the office of medical officer of health for the city in the terms of the advertisement published by the Town Council. In his letter Dr. Craven says, "I feel most strongly that the Council, having made an appointment outside the conditions of the advertisement (not the memorandum of duties), are morally bound to refund to me my expenses." The Council dismissed the claim, and the majority held that Dr. Craven had not even a moral claim, because the town clerk had supplied him with a memorandum of the duties of the medical officer, and there it is stated that, with the consent of the Council, their medical officer may undertake other work. At a meeting of the Public Health Committee, held last week, it was resolved to procure a book for the City Hospital, in which the medical officer must enter his name at each visit, and state the hour at which the visit was made, so that those having relatives in the hospital will be able to see how often they are visited. There are very few patients in the hospital at present.

THE ROYAL INFIRMARY.

The term of office of the three resident assistants to the medical and surgical staff of the Royal Infirmary terminates at the end of this month, and for the vacancies there are several candidates. The appointments are given only to graduates in medicine and surgery.

THE DEATH-RATE.

It was reported to the Public Health Committee that the death-rate in the city for last month was 17·21 per 1000.

Aberdeen, April 17th.

THE anniversary festival in aid of the funds of the Earlswood Asylum was held on the 13th inst., when subscriptions amounting to about £2000 were announced.

DUBLIN.

(From our own Correspondent.)

ROYAL COLLEGE OF SURGEONS IN IRELAND.

THE propriety of appointing a lecturer on Pathology has recently engaged the attention of the Council of this College, and it is probable that they will in a short time elect someone for the proposed subject. Candidates for the fourth or final professional examination of the Conjoint Scheme between the Colleges of Surgeons and Physicians are examined in Pathology, but attendance on a course of lectures is not compulsory.

SCHOOL OF PHARMACY, APOTHECARIES' HALL.

At a meeting of the Court held on the 13th inst., it was resolved that the School of Pharmacy attached to the Apothecaries' Hall be recognised, and that the course of demonstration given therein be accepted as constituting the necessary term of three months required under the present regulations.

DISMISSAL OF DR. RONAYNE FROM THE COMMISSION OF THE PEACE.

The Lord Chancellor last week notified to Dr. Charles Ronayne, of Youghal, that he had removed his name from the Commission of the Peace for the County of Cork. The reasons alleged are that a meeting having been proclaimed by the Government, Dr. Ronayne issued a counter proclamation which suggested that the meeting should be encouraged and supported.

ETHER DRINKING.

In some places in the north of Ireland ether is largely used as a substitute for whisky, one reason being its cheapness, inasmuch as a person can obtain for a penny sufficient ether to make him drunk. The subject of ether drinking in certain districts in Ireland has for some years attracted attention, and last week a clergyman moved a resolution bearing on the subject before the General Synod of the Irish Church. He proposed that a petition be presented to Parliament praying for the suppression of the sale of ether as an intoxicant in certain districts; but, as it was pointed out that ether was sold for other purposes than as an intoxicant, he substituted the word "regulation" for "suppression," and the motion as amended was adopted. There is a special kind of ether prepared for drinking purposes, and, although the Excise authorities have been applied to, they have refused to control its sale.

THE DWELLINGS OF THE WORKING CLASSES IN DUBLIN.

On last Saturday a meeting was held in the Mansion House, under the presidency of the Lord Mayor, to consider a scheme suggested by Sir Charles Cameron for the improvement of the dwellings of the working classes by forming a society, the members of which would undertake to build, or otherwise provide, proper dwellings for them. The Lord Mayor pointed out that the death-rate of Dublin was 9 per 1000 higher than in the suburbs, 10 per cent. higher than in London, 7 per cent. above Edinburgh, and 9 per cent. higher than that of twenty-eight large English towns. Sir Charles Cameron said he believed that the high death-rate of Dublin proceeded largely from the following causes: want of proper dwellings, insufficient and improper food, and defective clothing. It was impossible for sanitary authorities to remedy two of these evils, but it was in their power to deal with that arising from unhealthy dwellings. Much had been done by the sanitary authorities to improve the dwellings of the people, but vast was the task yet to be accomplished, though more than 2000 insanitary houses had been detenanted and closed within the last seven years. The dwellings of the poor in Dublin were more highly rented in proportion to the accommodation they afforded than was the case in most towns in the United Kingdom. In four selected streets in Dublin, having 175 houses with 1482 rooms, there were 1074 families occupying less than a room and a half per family. He believed that the class whose dwellings were in the most wretched state numbered not more than 1000, and comprised hawkers, charwomen, and fishwomen, many of whom were widows with large families, and other persons who earned but a few shillings a week. Few landlords cared to provide for this class, but the corporation should erect plain and healthy dwellings for them, for the dens which they at present occupied kept alive the fires of many infectious diseases, ready at any moment to extend to the dwellings of the wealthy classes. A great sanitary work would be accomplished if the employers of labour undertook to provide dwellings for their own workpeople. He proposed to form a society, each member of which would undertake to build one or more houses for his workpeople, or to convert existing houses into proper and healthful dwellings. If benevolent persons who employed no workmen would help in this good work on purely philanthropic lines, so much the better. He also advocated the principle of differential rating for taxation purposes in favour of artisans' and labourers' dwellings. The following motion was adopted: "That it was desirable in the interests of public health to adopt every means likely to improve the condition of the working classes"; and another to the effect that an association be formed of persons who would undertake to provide, as far as they could, proper dwellings for those in their employment. The proceedings then terminated.

SIR P. DUN'S HOSPITAL, DUBLIN.

I learn that the governors of this institution have consented, at the request of the Public Health Committee of the Corporation, to abandon their original intention of using the new wing of their hospital for the reception of fever patients, and it will be utilised for the treatment of non-infectious diseases. The situation of the fever wing had been objected to by parties residing in the immediate vicinity, and very properly so, and the papers having ventilated the matter, it came under the notice of the Public Health Committee, who communicated with the governors of Sir P. Dun's Hospital.

RICHMOND DISTRICT LUNATIC ASYLUM.

Last year attention was directed to the insanitary condition of this asylum by the resident medical superintendent (Dr. Conolly Norman), so that it is satisfactory to learn from the annual report recently issued that the deaths last year were less than the year preceding. That the institution was in a very insanitary condition was proved unmistakably, and a sum of nearly £10,000 will be expended in structural improvements and alterations.

Dublin, April 17th.

PARIS.

(From our own Correspondent.)

THE CONGRESS OF SURGERY (*concluded*).

M. TILLAUX, referring to the treatment of pseudo-arthroses, said how laborious and painful was the cure of this malady by the resection of the bones and the application of the suture. He considered that this operation was also dangerous, as on the femur it causes one death out of five cases. He would banish the bony suture in the treatment of pseudo-arthroses, as it complicates the operation and is a source of danger. M. Tillaux, therefore, proposes to reduce the operation to the section of the false membrane interposing, and placing the fragments of the bones in contact after having scraped the ends. In the supplementary operation of the ablation of the inferior extremity of the rectum, M. Delorme thinks that in this operation it is indispensable to suture the rectal extremity to the cutaneous wound, in employing the procedure practised by Emmet for perineorraphy. In this manner the union is made solid, and one has a better chance of avoiding, eventually, incontinence of fæcal matter.

M. Picqué communicated the case of a woman, aged fifty-nine, affected with an aneurysm of the femoral artery. He ligatured the external iliac artery with silk thread, and the patient was completely cured, notwithstanding the formation of an abscess in the neighbourhood of the sac, which was situated in the groin.

M. Le Bec of Paris reported the case of a patient who was the subject of an osteo-sarcoma of the thigh. The case was treated by the disarticulation of the hip, but the malady having become generalised, the patient succumbed.

M. Vincent of Lyons, *à propos* of a case of cholecystotomy in a child, whose death took place by secondary hæmorrhage, made the following remarks: In cholecystotomy in children, it is necessary to practise the incision not on the side but in the median line, and above the umbilicus. The position

of the liver in young subjects, which is lowered, necessitates this modification in the procedure.

M. Jalaquier of Paris narrated two cases of hernia of the cæcum, in which he applied the radical cure with complete success.

Dr. Cazin of Berck-sur-Mer opened a discussion on the recurrence of neoplasms operated on, in which he gives the results of his practice from 1862 to 1886. Of 102 cases of scirrhus of the breast, of which 60 were complicated with adenopathy, and 42 without any glandular complication, in the first 60 he obtained 7 definite cures, 48 relapses, 3 deaths, and 2 results unknown; in the 42 others there were 8 cures, 28 relapses, 2 deaths, and 5 results unknown. Of 120 encephaloid tumours, 80 were with glandular lesions, and 40 without them. With the first 80 there were 5 cures, 67 relapses, 4 deaths, and 4 results unknown; with the 40 others there were 8 cures, 1 death, and 5 results unknown. The relapses occurred from three months to seven years after operation. He attributes the proportion (relatively considerable) of cures to the practice he always followed: free ablation, without occupying himself about the immediate union of the wound; scooping out the glands of the axilla, even when they appear to be healthy; and removing the trunks of the lymphatics situated between the tumour and the axillary glands.—M. Verneuil remarked that of late the number of cancerous affections have considerably increased, not only in cities, but in the country. Relapses are also very frequent. He is unable to explain the cause of this state of things, but he would simply suggest that it may be due to what is called the modern diet; vegetables are almost completely abandoned; people have become more and more carnivorous. In the meantime he would recommend an arsenical and alkaline treatment, which should be continued before and after operations for cancer. He prescribes three milligrammes of arsenic per day and a tablespoonful of magnesia every morning in a glass of cold water. The ordinary drink should be Vichy or other alkaline water. He strongly protests against the baneful practice of administering the iodide of potassium in such cases.—M. Poncet, of Lyons, recounted the cases which he had observed in his practice, and came to the following conclusions: 1. Relapse is almost inevitable in subjects presenting a direct cancerous heredity. 2. When the glands are affected, the tendency to relapse is found accentuated. 3. The best prophylaxis consists in rapid and free ablation. In certain regions, the surgeon must not recoil before these preliminary operations, the importance of which may appear to be out of proportion to the extent of the tumour to be removed. 4. One must also abstain from all attempt at a radical operation in too unfavourable circumstances, as intervention in such cases may precipitate the course of the malady.—M. Bœckel of Strasburg, after having enumerated the different cases of tumours observed by him, concluded by stating that in cancer there are more than 80 per cent. of relapses.—M. Pollosson of Lyons considered that in diffuse myomata of the extremities time should not be lost by incomplete operations, and that in a large number of cases it would be better to sacrifice a whole limb.—M. Labbé recalled the rules which guide the extirpation of tumours, and, outside these rules, he admitted that the surgeon must not be contented, in the ablation of the adenomata of the breast, with removing the tumour alone, but, to avoid any risk of relapse, the fibrous capsule which envelops the tumour should be removed. Finally, in voluminous sarcomata of the breast, M. Labbé observed that frequently the surgeon believed that he had extirpated the gland, to leave which would be a fatal mistake, as relapse is then almost certain. M. Labbé declared himself a partisan of immediate autoplasties, destined to fill up the loss of substance due to the ablation of tumours, and, like M. Verneuil, thought that the arsenical and alkaline treatment diminished the risk of relapse.—M. Richelot of Paris reported new cases of vaginal hysterectomy for uterine cancer, and formulated the following conclusions: 1. Patients who are definitively cured are those who have been early operated upon. 2. The same rules should be observed for uterine epithelioma as for cancer of the breast or that of the lips; that is, the incisions should be made as far into the morbid tissue as possible, and even a little beyond. 3. In certain cancers of the mouth of the womb, amputation above the vaginal canal, with resection of the parietes, is preferable to total hysterectomy without resection.—M. Galezowski called the attention of the Congress to the neoplasms of the globe of the eye and to their relapses. These tumours, he said, are rare in the posterior hemisphere of the eye; very frequent, on the contrary, in the anterior segment. Melano-sarcomatous tumours and epitheliomata do not appear to be reproduced through the blood or lymphatic vessels, as they remain localised in the parts affected from the commencement. He, like M. Verneuil, also remarked that malignant neoplasms are in the eye, as in other parts of the body, much more frequent than they were twenty-five or thirty years ago. M. Galezowski observed that it is oftener possible than is believed to destroy these tumours without sacrificing the eye. In these operations the galvano-cautery is the instrument to be chosen.—M. Sabatier of Lyons declared himself a partisan of the secondary union of wounds consecutive to ablation of cancerous neoplasms. When the surgeon closes the wound to obtain union by the first intention, it is to be feared that cancerous germs may be enclosed in the wound, which might have been eliminated with the products of suppuration in case of secondary union. It is for this reason that he thinks that, to avoid local relapses, it is better to remove the cancerous tumour in its entirety, than to do it piecemeal, as the fragmentation of the tumour produces more easily cancerous particles, which may inoculate themselves on a fresh wound.

M. Poncet of Lyons, in speaking of the pathogeny of ingrowing of the nail, developed the idea that it was owing to a defect of harmony between the development of the constituent parts of the toe that onychia is produced in adults. This theory is in complete opposition to that propounded by Gosselin and other surgeons.

M. Le Fort of Paris applied electrolysis in the treatment of pseudo-arthroses. In three cases he obtained by the aid of this method manifest success. He recommends that the *séances* should not be too long. He introduces a gold needle between the fragments; this is the negative pole.

M. L. H. Petit of Paris gave an account of twenty-five cases of gaseous tumours or aeroceles of the neck. He explained that these tumours have two pathogenic modes: the hernia of the tracheal or laryngeal membrane after incomplete perforation or rupture of the parietes of the tube, or the passage of air into the cellular tissue after complete rupture of the parietes. They commence in three ways: (1) Quickly; (2) quickly at first and progressively afterwards; (3) very slowly. Contrary to what has been said, some of these tumours are reduced or cured spontaneously, such as those that appear suddenly. They may be treated successfully by compression.

M. Jeannel of Toulouse had practised longitudinal osteotomy on several children, and obtained very good results. He applies this term to an operation which consists in dividing bones curved by rachitism, with the object not only of straightening but of lengthening them. He succeeded in completely correcting very marked incurvations, and obtained a lengthening of more than one centimetre.—M. Ollier, who had called particular attention to this operation, supported the conclusions of M. Jeannel, and observed that one has great difficulty in obtaining the lengthening of bones, and that longitudinal osteotomy is the only means by which it may be obtained.

M. Bories of Montauban, after having treated a man the subject of a voluminous erectile tumour of the lower lip, which had invaded the left cheek, the gums of the lower jaw, the masseter region, &c., causing a hideous deformity and placing the life of the patient in danger by frequent hæmorrhages, attacked it by electrolysis. He introduced two needles at three millimetres from one another. Each *séance* lasted from eight to ten minutes. After two months' treatment the tumour disappeared. M. Borries then corrected the deformity which remained by the employment of caustic darts and a complementary operation with the bistoury. The definitive result was most satisfactory, as may be judged by the photographs of the patient before and after the operation.

M. Duplouy of Rochefort, in a case of Pott's disease, consisting of a tuberculous abscess of the deep cervical region, finding the transverse process of the axis denuded, rugous, and friable, resected the tubercle of the diseased process, as well as the posterior branch which supports it. The sequelæ were very simple, but the patient succumbed later on to other manifestations of his diathesis.

In the treatment of the suppuration consecutive to traumatisms of the eye, M. Abadie of Paris advises that the conjunctiva, the ordinary receptacle of microbes, should always be thoroughly cleansed. To arrest the progress of the suppuration, the cornea should be slightly touched with a fixed

point of the galvano-cautery. These cauterisations should be repeated once every twelve hours.

M. Fontan of Toulon read a paper on the temporary resection of the superior maxillary as a preliminary operation for the ablation of naso-pharyngeal polypi, which may be abbreviated as follows: Enormous polypus in a lad of fifteen. Operation as indicated by J. Roux, and which had never been practised on the living subject, rendered the ablation of the polypus easy. Total suture of the bones and of the soft parts; rapid consolidation; persistence of the deviation of the soft palate; ulterior staphyloraphy.—M. Kirmisson of Paris reported two cases of resection of bones to remedy loss of substance in soft parts, in which he had employed this mode of treatment with success.

M. Redard related the case of a woman aged seventy-five, having an old fracture in the lower third of the left leg, with a defective callus, on whom osteotomy was performed. The reduction was performed without difficulty, and without its being necessary to divide the tendon of Achilles. The patient was quite cured notwithstanding her advanced age. M. Redard remarked that this case proves that old age is no contra-indication for this operation, and it also shows the superiority of osteotomy over osteoclasia.

Dr. Doléris of Paris, after having pointed out the inconveniences of the various methods in vogue in the treatment of uterine displacements, adopted a treatment in which is combined the shortening of the round ligament with colporraphy and perineorraphy. He performed this operation on thirty women, with excellent results.

M. Duzea of Lyons had practised resection in several cases of anchylosis of the elbow, with very good results.—M. Ollier vaunts the same treatment.

M. Reynier of Paris recently treated by abstention a wound of the stomach produced by a ball from a revolver of small calibre, and the patient got rapidly well. M. Reynier does not wish to say by this that in other similar cases he would be a partisan of abstention, but he considers that the surgeon should regulate his conduct less by the existence of traumatism than by the peritoneal reaction, and on the local and general symptoms which the patient may present.

M. Lucas-Championnière of Paris proposed a new operation to remedy old luxation of the patella. In a young man, aged twenty-eight, who presented an irreducible luxation of the patella outwards, the surgeon scooped out on the internal condyle of the femur with the gouge and hammer a hollow sufficiently deep to lodge and retain the patella. The latter was then placed and fixed in the hollow by means of a dozen sutures, including the fibrous parts of the articulation. The skin was drawn over, and twelve days after this operation union was complete. Since then the movements tend to come back in the knee of the patient.

M. Duret of Lille practised the operation of Estlander-Letiévant on a child of four years affected with an old purulent pleurisy. He removed five ribs of from twelve to fourteen centimetres in extent. The child got rapidly well.

M. Levrat of Lyons communicated the case of a child of six years and a half affected with anchylosis of the jaw, on whom he had practised the operation of Rizzoli-Esmarch. The space behind the last molar permitted the operation to be performed without opening the buccal cavity. The patient recovered all his movements, with a space of one centimetre and seven millimetres between the incisors. At the end of one year the patient was able to masticate even tough meat.

The meeting was closed on March 17th, and the President announced that the next Congress, which will be the fourth, will be opened in Paris on the first Monday in October, 1889, under the presidency of Baron Larrey and the vice-presidency of Professor Guyon of Paris.

THE SERVICES.

BOMBAY MEDICAL ESTABLISHMENT.—The Queen has approved of the following promotions made by the Governments in India:—Deputy Surgeon-General John Pinkerton, M.D., to be Surgeon-General, and Brigade Surgeon Peter Stephenson Turnbull, M.D., to be Deputy Surgeon-General.

ADMIRALTY.—Royal Naval Artillery Volunteers (Clyde Brigade): John Macintyre, M.B., to be Surgeon (dated April 16th, 1888).

The following appointments have been made:—Surgeon E. Bray, to the *Duke of Wellington* (dated April 17th, 1888); Surgeon John L. Aherne, to the *Vernon*; Surgeon William M. Craig, to the *Invincible*; Surgeons George A. Dreaper and George H. Foott, M.D., to the *Sultan* (dated April 24th, 1888); Surgeon J. M'Donnell, to the *Agincourt* (dated April 17th, 1888); Surgeon Richard E. Biddulph, to the *Téméraire*; Surgeon Charles S. Woodwright, to the *Boscawen* (dated April 24th, 1888); and M. A. English, to be Surgeon and Agent at Crookhaven (dated April 18th, 1888).

ARTILLERY VOLUNTEERS.—1st Forfarshire: S. Beattie, M.B., to be Acting Surgeon (dated April 18th, 1888); and D. Laing, M.D., to be Acting Surgeon (dated April 18th, 1888).

RIFLE VOLUNTEERS.—1st (Brecknockshire) Volunteer Battalion, the South Wales Borderers: David Valentine Rees, Gent., to be Acting Surgeon (dated April 18th, 1888).—1st Volunteer Battalion, the Lincolnshire Regiment: Honorary Assistant-Surgeon R. Lanphier resigns his commission (dated April 18th, 1888).

Obituary.

DR. EMIL BESSELS.

AT Charfreitag, Stuttgardt, on the 30th ult., this well-known physician, naturalist, and arctic explorer succumbed to heart failure, at the early age of forty.

Dr. Emil Bessels was born in 1847 at Heidelberg, and studied medicine and natural history first at the University of Jena and finally at that of his native city. At the instance of Petermann, the geographer, he embarked on his first expedition to the North Pole on board the steamship *Albert* in 1869, the purpose of the voyage being to explore the eastern frozen sea between Spitzbergen and Nova Zembla and to investigate Gillis-land. Only the first part of this project could be carried out, as the state of the ice made disembarkation on Gillis-land impossible; but the work effected was important. Hydrographic observations were made and a complete series of deep-sea soundings were taken, and for the first time the existence of the Gulf Stream east of Spitzbergen was demonstrated.

In 1871 Dr. Bessels was summoned to the United States to undertake the scientific direction of the North Pole Expedition under Ch. Francis Hall. In pursuance of his researches he penetrated into the northern prolongation of Smith's Sound, and reached the 82° 26' of north latitude—a feat performed by no previous voyager. Unfortunately, the ship—the *Polaris*—foundered, carrying all his scientific treasure-trove to the bottom. From the direction of the wave current and from the pieces of walnut-wood borne upon it, he concluded that there was a northern connexion of this arm of the sea with Behring's Straits. Besides his contributions to German journals and to the Bulletins of the United States Geological and Geographical Survey, Dr. Bessels wrote the first part ("Physical Observations") of the narrative of the voyage of the *Polaris*, a work in three volumes, entitled "Scientific Results of the United States Arctic Expedition" (Washington, 1876), also published in German (Leipzig, 1878). After this he settled at Washington as secretary to the Smithsonian Institution, where a long and useful career seemed in store for him, when, on Christmas Eve, 1885—a night of extraordinary cold,—his house took fire, and the flames spread so rapidly that he had barely time to escape by letting himself down from the first floor in his nightshirt by means of a linen tablecloth. He then caught a chill, from which he never quite recovered. This, and his grief at the loss of his precious library and scientific treasures, made a changed man of him. He came to Stuttgardt—a place which had great attractions for him as the scene of early studies in the Royal Natural History Museum,—and there for two years he worked at his favourite pursuits, and also at literature, till, about the 22nd ult., he had to take to bed, from which he never rose. He was found dead, having apparently passed away as suddenly as painlessly, leaving a blank in the medical and scientific circles of the Würtemberg capital which will not soon be filled.

THE annual general meeting of the North-Western Association of Medical Officers of Health was held on the 12th inst., when a satisfactory financial and general report was presented and adopted.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination in Anatomy and Physiology at a meeting of the Board of Examiners on April 2nd:—

J. Stalker, J. G. Ouston, A. B. Sturges, C. Benson, Leeds School of Medicine; J. E. Godson, A. W. McMichael, S. H. Perry, L. P. Gamgee, C. A. Green, A. J. Green, Birmingham; H. S. Jackson, S. H. Lucy, F. E. Scrase, Bristol School of Medicine; L. W. Dryland, St. Bartholomew's Hospital; D. L. Davies, J. H. Dow, J. L. Fletcher, R. M. Littler, J. S. Whitaker, Owens College, Manchester; H. Hopkins, R. H. W. Dunderdale, Liverpool Infirmary School of Medicine.

ANATOMY ONLY.—H. Cross, Sheffield; W. Pearson, Owens College, Manchester.

PHYSIOLOGY ONLY.—W. S. Finch, Liverpool; A. W. Senior, Owens College, Manchester; C. Wintle, Bristol.

The following passed the examination on April 3rd:—

ANATOMY ONLY.—B. R. Sawhny, Newcastle-on-Tyne; B. G. Neale, J. S. Griffith, Bristol School of Medicine; F. C. Bottom, A. H. Beardmore, Sheffield; J. T. Barrow, Charing-cross Hospital; J. S. Sewell, Liverpool; W. A. Stott, J. Fearnley, Leeds School of Medicine; J. S. Pickford, D. Headridge, G. W. Holton, Owens College, Manchester; G. Kendrick, Birmingham; D. W. Morgan, R. R. H. Wonnacott, London Hospital; C. W. Emlyn, St. Bartholomew's Hospital; O. E. Keller, Leipsic.

PHYSIOLOGY ONLY.—C. F. Sutton, A. H. Aldridge, R. Smith, Owens College, Manchester; W. E. Pollitt, O. F. Rowley, H. Tempest, E. B. Collings, A. H. Reinhardt, Leeds; E. P. H. Lulham, A. H. Meadows, Guy's Hospital; G. M. Arkle, E. C. Wimberley, S. Greenwood, Birmingham; W. Hutchinson, Harvard University and London Hospital; W. B. de Mille, Halifax University.

The following passed the examination on April 4th:—

ANATOMY AND PHYSIOLOGY.—B. G. M. Baskett, Bristol School of Medicine; C. H. Preston, Owens College, Manchester; R. H. Shaw, Leeds; B. L. Robinson, St. Mary's Hospital; T. L. Paget, M. L. Hepburn, R. G. Hogarth, B. Turner, C. Addison, St. Bartholomew's Hospital; F. R. Riley, E. Chichester, A. H. Smith, C. S. Walfridsson, W. H. Sturge, London Hospital; R. M. H. Walford, St. George's Hospital; C. de Silva, Ceylon Medical College; C. Elierman, Mr. Cooke's School of Anatomy and Heidelberg University; H. C. Harper, Westminster Hospital; T. G. Stevens, W. Winslow, Guy's Hospital; D. F. Shearer, W. F. Umney, St. Thomas's Hospital; T. H. Ionides, University College; N. J. Vaishnav, Grant Medical College.

ANATOMY ONLY.—A. W. German, Liverpool; G. Martyn, King's College Hospital; A. A. Fennings, St. Mary's Hospital; J. W. Graham, St. Bartholomew's Hospital.

PHYSIOLOGY ONLY.—S. F. Wright, St. Thomas's Hospital.

The following passed the examination on April 5th:—

ANATOMY AND PHYSIOLOGY.—T. A. O. Langston, H. S. Thurston, E. F. Syrett, H. J. Waring, St. Bartholomew's Hospital; G. D. K. Bannerman, London Hospital and Mr. Cooke's School of Anatomy; F. E. Rogers, London Hospital; R. N. Daniel, J. W. Mactavish, J. E. Harper, S. Zeidan, St. Thomas's Hospital; D. Drew, E. Ringrose, L. Williams, A. C. Stevenson, J. E. Paul, University College Hospital; J. B. N. Vickers, G. M. Winter, St. Mary's Hospital; C. Thompson, Charing-cross Hospital; M. E. M. Makalua, J. Wood, King's College Hospital; E. C. Long, C. E. Soulby, Middlesex Hospital.

ANATOMY ONLY.—E. J. H. Budge, Guy's Hospital; A. Dalzell, St. Thomas's Hospital.

PHYSIOLOGY ONLY.—P. C. B. Swanseger, Charing-cross Hospital; W. K. Steele, Guy's Hospital.

The following passed the examination on April 6th:—

ANATOMY AND PHYSIOLOGY.—F. M. Mangan, R. W. Richards, A. Quennell, F. M. J. Powell; W. H. Maidlow, St. Bartholomew's Hospital; E. J. Whitehead, H. S. Cooper, St. Thomas's Hospital; T. J. Wood, C. B. Turner, University College; E. A. Rock, H. L. Curling-Hope, Middlesex Hospital; M. S. F. Monier-Williams, St. George's Hospital; D. L. Soutter, King's College Hospital; E. H. Sharman, Liverpool, Edinburgh, and Westminster Hospital; A. K. Barrett, St. Mary's Hospital; J. H. Bryant, H. W. John, Guy's Hospital; A. W. Allen, A. R. Colyer, Charing-cross Hospital.

ANATOMY ONLY.—H. W. Weeks, E. W. Smith, University College; H. V. Prynne, Middlesex Hospital; H. L. Morgan, Westminster Hospital; A. Thorne, St. Mary's Hospital; J. L. Blakiston, King's College Hospital.

PHYSIOLOGY ONLY.—R. T. Bakewell, W. F. Chambers, University College Hospital; N. Marder, St. Bartholomew's Hospital; A. Lawson, Middlesex Hospital.

The following passed the examination on April 7th:—

ANATOMY AND PHYSIOLOGY.—C. P. Le Quesne, F. Arthur, C. P. M. Swales, J. Wightman, C. H. Langford, St. Bartholomew's Hospital; H. Burden, E. Du Bois, St. Thomas's Hospital; A. Crick, St. Thomas's Hospital and Mr. Cooke's School of Anatomy; K. M. Mackenzie, G. E. T. Haydon, London Hospital; H. S. Baker, D. J. Jones, J. B. Williams, Charing-cross Hospital; P. J. Duffy, P. Evans, A. J. Chambers, University College Hospital; B. W. Hogarth, Guy's Hospital; L. Rogers, J. C. Wood, St. Mary's Hospital; W. F. Adams, W. A. Eden, M. K. Soutter, J. J. Waddelow, King's College Hospital; F. B. Marin, R. H. Reynolds, C. L. Lake, Westminster Hospital; P. G. Garrett, Middlesex Hospital.

ANATOMY ONLY.—A. G. R. Cameron, H. M. Phillpots, St. Mary's Hospital; H. J. F. Badcock, Charing-cross Hospital; A. Kidd, Middlesex Hospital; J. B. Lemon, St. Bartholomew's Hospital; G. Pernet, Edinburgh and University College Hospital; F. T. Morris, University College Hospital.

PHYSIOLOGY ONLY.—W. A. Hampton, Middlesex Hospital; J. W. Davies, King's College Hospital.

The following passed the examination on April 9th:—

ANATOMY AND PHYSIOLOGY.—M. L. Margrave, R. Brown, H. W. C. Austen, St. Bartholomew's Hospital; H. R. Girdlestone, W. H. Miller, H. D. Levick, J. E. F. André, St. Thomas's Hospital; F. G. S. S. Harvey, V. W. Law, St. Mary's Hospital; W. B. Morton, University College Hospital; T. R. Hamlen, E. Jones, Middlesex Hospital; A. Rudd, A. T. Coleman, H. C. De Renzi, Westminster Hospital; E. W. M. Higgs, Charing-cross Hospital; D. W. Samways, Guy's Hospital.

ANATOMY ONLY.—H. Clift, C. A. Coventon, St. Bartholomew's Hospital; E. J. Finch, St. Mary's Hospital; C. H. C. Visick, E. B. Allan, University College Hospital; J. B. O. Richards, L. J. Minter, King's College Hospital.

PHYSIOLOGY ONLY.—A. G. Minshall, University College Hospital; F. A. Harsant, Middlesex Hospital; H. W. West, London Hospital.

The following passed the examination on April 10th:—

ANATOMY AND PHYSIOLOGY.—A. A. Hewer, P. Furnavall, R. Stephens, C. H. Fowler, A. G. Gane, H. A. Eccles, C. B. Dale, A. Carney, St. Bartholomew's Hospital; H. L. Hatch, St. Mary's Hospital; D. C. Johnston, G. F. Dickinson, F. C. Porter, F. H. S. Blucke, Charing-cross Hospital; R. E. S. Krohn, University College Hospital; T. G. Brodie, A. Whitfield, E. L. Pritchard, King's College Hospital; T. H. Kellock, A. King, H. T. Jones, St. Thomas's Hospital; A. W. Harrison, Westminster Hospital.

ANATOMY ONLY.—S. H. Rentach, King's College Hospital; R. F. J. Gill, A. G. Rider, T. G. S. Crouch, University College Hospital; H. Knevitt, London Hospital; St. J. B. Killery, H. Kerswill, St. Bartholomew's Hospital; A. Jeffreys, St. Thomas's Hospital.

PHYSIOLOGY ONLY.—J. Mountford, Charing-cross Hospital; C. G. Hoysted, Charing-cross Hospital and Mr. Cooke's School of Anatomy.

UNIVERSITY OF ABERDEEN.—At the graduation on the 11th inst. the following candidates received degrees in Medicine and Surgery. The awarding of Honours has been deferred until the graduation in July:—

DEGREE OF M.D.

Bennet, F. A., M.A., M.B., C.M., Victoria, Australia.
Glaister, J., M.B., C.M., Putney.
Jenkyns, J., M.B., C.M., Belize, British Honduras.
Lawson, W., M.B., C.M., West Bromwich.
Russell, John, M.B., C.M., Arbroath.
Tough, W. R., M.A., M.B., C.M., Crook, Durham.
Wilson, Alex., M.A., M.B., C.M., Midcalder.

DEGREES OF M.B. AND C.M.

Allan, George, Fife-Keith.
Barclay, John, Dunecht.
Cumming, Robert, Duthil, Strathspey.
Dingwall, A., M.A., Aberdeen.
Don, James, Cults.
Duke, Alex. L., Arbroath.
Eatough, R., Brindle, Lancashire.
Ellis, A. Dowling, Aberdeen.
Forsyth, John G. A., Abernethy.
Galloway, A. R., M.A., Inverurie.
Gibb, George, M.A., Aberdeen.
Gordon, George, Huntly.
Grant, Cormack, Caithness.
Illingworth, T. W., Scarborough.
Joss, John, M.A., Buntly.
Keith, A., Turriff.
Kydd, D. A. F., Pollockshields, Glasgow.
Leach, Alfred, London.
Mackenzie, W. L., M.A., Alness.
M'Kerron, R. G., M.A., Aberdeen.
Middleton, William R. C. M.A., Aberdeen.
Rae, T. Moir, M.A., Udny.
Riddell, J. S., M.A., Aberdeen.
Russell, G. R. C., Orkney.
Saunders, Alfred M., M.A., Woodside.
Skeen, W. St. John, Aberdeen.
Townsend, R. M., Cape Colony.
Will, Alick Murray, Aberdeen.

The following candidate has passed the examinations for the degrees of M.B. and C.M., but will not graduate until he has attained the necessary age:—

James Grant, Tomintoul.

The diploma of Public Health was conferred on the following gentlemen:—

Ferguson, Alfred Cornwall, M.A., M.B., C.M.
Rose, George, M.B., C.M.
Saunders, Alfred M., M.A., M.B., C.M.

UNIVERSITY OF ST. ANDREWS.—The following gentlemen having passed the required examinations had the degree of Doctor of Medicine conferred upon them on April 18th:—

Bingham, J. Joseph, M.R.C.S., L.S.A.Lond., Alfreton.
Elder, W. Nicol, L.R.C.P.Ed., L.R.C.S.Ed., Edinburgh.
Hirst, Albert, F.R.C.P.Ed., Prestwich.
Moir, Alex., L.R.C.P.Ed., L.R.C.S.Ed., Edinburgh.
Richardson, W., L.R.C.P.Ed., F. & L.R.C.S.Ed., L.M., Reading.
Rutherford, J. J., L.R.C.P.Ed., L.F.P.S.Glas., L.M., Shipley.
Scott, B. Irwin, L.K.Q.C.P., L.R.C.S.Irel., Brackley.
Smith, Wm. Woodriff, L.R.C.P.Ed., L.S.A.Lond., Sittingbourne.
Stirling, Stewart, F. & L.R.C.S.Ed., Edinburgh.
Thorne, W. Bezly, L.R.C.P.Lond., M.R.C.S., London.

CAVENDISH COLLEGE, CAMBRIDGE.—The committee for forming a new association, under the "no profit" clause of the Companies' Act, to take over Cavendish College, have received promises amounting to about £17,000, and a preliminary resolution for forming the new association has been agreed to. It is confidently expected that the new dining-hall and offices necessary to complete the building will be shortly commenced, and the College be enabled to meet the wants of students who desire a University education at an early age and moderate expense.

ST. BARTHOLOMEW'S HOSPITAL.—The governors of St. Bartholomew's Hospital have, by almost unanimous resolution, decided to agree to the Chancellor of the Exchequer's conversion scheme.

NORTH LONDON CONSUMPTION HOSPITAL. — The Right Hon. Lord Robartes will preside at the annual festival dinner in aid of this charity, to be held on the 25th inst. at the Hôtel Métropole.

THE SWEATING SYSTEM. — The House of Lords' Committee on the Sweating System was resumed on Tuesday, when evidence was taken on the practice of sweating in the slop boot trade.

BOSTON COTTAGE HOSPITAL.—Mr. E. Stanhope, M.P., has sent a donation of £25 towards the building fund for the erection of a new wing to the Boston Cottage Hospital, and Mr. J. Rice, of Manchester, has forwarded £50 for the purpose of furnishing one of the wards.

THE SPANISH MILITARY SANITARY STAFF.—Don Valeriano Weyler, Director-General of the Spanish Military Sanitary Staff, having been appointed Captain-General of the Philippine Islands, the important post thus vacated has been conferred on his Excellency General Don Zacarías Gonzalaz Goyeneche.

BEQUESTS.—Jervis-street Hospital has received a bequest of £100 from the late Mr. Wm. Bruton.—Dr. Toleken has left £50 to the Adelaide Hospital and £50 to the Molyneux Blind Asylum.—The late Mrs. William Cults of Harrogate bequeathed £1000 to the Beckett Hospital, Barnsley.

SMALL-POX IN HAVANA.—The *Isthmian Echo* of the 24th ult. states that small-pox was then greatly prevalent in Havana. The deaths in the city in February numbered 180, and for December nearly 400. These deaths represent nearly 2000 cases of small-pox. The Government is stated to be doing nothing; what is being done is the work of private individuals. During the recent epidemic in Santiago de Cuba, when over 1200 persons died, the steamers stopping there arrived and sailed as usual.

A COTTAGE HOSPITAL FOR BARNET. — On the 7th inst., the Earl of Strafford, Lord-Lieutenant of the county of Middlesex, laid the foundation stone of a cottage hospital which is about to be erected at Barnet as a permanent memorial of the occasion of Her Majesty's Jubilee.

PROVIDENT SURGICAL APPLIANCE SOCIETY. — The sixteenth anniversary festival in connexion with this Society was held on the 13th inst. at Willis's Rooms, under the presidency of Mr. John Aird, M.P. During the evening subscriptions and donations amounting to about £1200 were announced by the secretary.

GENERAL HOSPITAL, NOTTINGHAM.—The Earl of Manvers presided at the annual general meeting of the board of governors, held last week. The accounts for the year showed a deficit from last year of £446 16*s.* 6*d.* During the last ten years efforts had been made to reduce the expenses, and they had in consequence been lessened from 3*s.* 3½*d.* per head daily to 2*s.* 6*d.*

CENTENARIANS.—Margaret Hannah, who attained her hundredth birthday on February 2nd, died at Keighley on the 10th inst., from bronchitis, after a few days' illness.—The death at Pertenhall, Bedfordshire, is also announced of Mrs. Cant, who had attained the age of a hundred years and seven months. For the past five years she had been blind, but otherwise enjoyed good health.

DEVONSHIRE HOSPITAL AND BUXTON BATH CHARITY. From the quarterly statement submitted by the committee of management to the meeting of subscribers, held on the 8th inst., it appears that 273 in-patients were admitted and 73 remained on the books at the end of the quarter. It was stated that nearly the whole of the patients were able to use the baths of the mineral water, notwithstanding the complicated nature of many of the cases. The financial position has been satisfactorily maintained.

ITALIAN EXHIBITION.—The following gentlemen have been appointed as Medical Staff by the Executive Council to the above Exhibition —Dr. Sasella, physician to the Italian Hospital, Dr. Martin, Dr. A. G. Bateman, Dr. Whitcombe, and Dr. Richmond. Arrangements have been made which will secure the presence of a medical officer from the opening to the close of the Exhibition daily. Rooms suitable for medical and surgical consultation have been set aside in the main building, and a properly equipped ambulance with bearers has been organised, so that accidents or cases of sudden illness can be promptly dealt with.

THE GREAT NORTHERN CENTRAL HOSPITAL.—The Clothworkers' Company have contributed £250 and the Merchant Taylors' Company £50 towards the Islington Jubilee Fund, which will be closed on April 20th, the anniversary of its inauguration. The fund amounts to nearly £5500, and will be applied towards providing a special ward in the Great Northern Central Hospital, Holloway-road.

PRESENTATION.—On the 11th inst. Mr. Hutchison, L.F.P.S. Glas., surgeon to the Abbey Parish poorhouse and lunatic asylum, &c., who for the past fifty years has acted as a medical practitioner in Paisley, was entertained to supper in the Globe Hotel, and presented, in recognition of his jubilee as a doctor, with a purse containing 130 sovereigns and a handsome gold chain.

NORFOLK AND NORWICH HOSPITAL.—The annual general board meeting of the governors of this institution was held on the 14th inst., when it was reported that the number of in-patients treated during the year was 1352, as against 1124 in 1886. The number of out-patients was 3492, as against 3650. The income for the year was £7044, and, after defraying the charges against the hospital, the sum of £1250 remains in the hands of the treasurer.

"NEW YORK IN DANGER OF CHOLERA."—Under this heading the *Scientific American* in a recent issue gives the result of analyses of the water of New York Bay, by Assistant Surgeon J. J. Kinyonn. After closely studying the currents of the upper bay, he is led to believe that if dejections from cholera patients should be thrown into the lower bay cholera could gain a foothold on the contiguous shores, where every condition favourable to its development and propagation sometimes exist.

NATIONAL DENTAL HOSPITAL.—The twenty-sixth annual meeting of this hospital was held on the 13th inst., the Earl of Stratford presiding. The report showed a slight increase in the receipts, although no special appeal for funds had been made. The number of cases treated during the year was 39,598—an increase of 4877 on 1886. The renewal of the lease of an eligible site had been obtained for the erection of a new hospital, at a cost of £4000, the present one being quite inadequate for the rapidly increasing number of patients and students.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The usual quarterly court of directors of the Society was held on Wednesday, April 11th. The President, Sir James Paget, took the chair. Three new members were elected, and the deaths of three announced. The deaths of three widows in receipt of grants were reported. A fresh application for relief was read from a widow for herself and five children, and a grant was made her. Applications for a renewal of their grants were made by sixty-one widows, seven orphans, and three orphans on the Copeland Fund; and a sum of £1389 10*s.* was recommended for distribution at the next court. The expenses of the quarter were £57 14*s.* A legacy from the executors of Mrs. Elizabeth Douglas of £900 was announced. The following gentlemen were recommended for election as directors at the annual general meeting in place of six senior, who retire—viz., Dr. Matthews Duncan, Dr. Buzzard, Dr. Glover, Dr. Hett, Mr. Brailey, and Mr. Spencer Watson. The annual general meeting was fixed to be held on May 18th, at 5 P.M. The centenary dinner will be on October 29th.

MEDICAL NOTES IN PARLIAMENT.

Smoke Abatement.

IN the House of Lords, on the 16th inst., Lord Stratheden and Campbell presented a Bill for the abatement of smoke in the metropolis. It was, he said, the same Bill as that of last year, with some modifications suggested by the report of the Select Committee on the subject. The Bill was read a first time.

Fire Inquests.

In the House of Commons on the 13th inst., Sir Lyon Playfair brought up the report of the Committee on Fire Inquests in the City of London, and it was ordered to lie on the table.

The Vaccination Bill.

This Bill was withdrawn.

Contagious Diseases Acts in India.

In reply to Mr. Stuart, Sir J. Ferguson, in the absence of Sir J. Gorst, said that the question of the Contagious Diseases Acts was being inquired into in the Home Department of the Government of India, and a report was expected.

Burgh Police and Health (Scotland) Bill.

On the 16th inst., on the motion of the Lord Advocate, this Bill was read a second time, on the understanding that it should be referred to a select committee.

The Horse Tax.

Several petitions in favour of exempting members of the medical profession from the horse tax and carriage tax were presented.

The Medical Staff Corps.

On the 17th inst., Dr. Clark asked the Secretary of State for War whether the new general order restricting the enlistment of men for the Medical Staff Corps to three years' army and nine years' reserve service had been considered or approved by the Director-General; and whether he had considered that the result of the new regulations might be that the men of the corps would scarcely have become skilled in their nursing duties as orderlies when they would be removed and replaced by raw, unskilled men.—Mr. B. Stanhope, in reply, said that every army order was issued on the responsibility of the Secretary of State after consultation with his professional advisers. The importance of having a large reserve of trained men of the Medical Staff Corps available in war time was so great that the disadvantage of a somewhat curtailed training must be faced.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOYCOTT, W. F., M.B., C.M.Ed., has been appointed Senior House-Surgeon to the Ancoats Hospital, Manchester, vice A. W. Hunton, M.R.C.S., L.R.C.P.Lond., resigned.

BROWN, F. L. HARMAN, M.B., C.M.Ed., late Assistant Medical Officer, Norfolk County Asylum, has been appointed Assistant Medical Officer to the Bristol Borough Asylum.

DAY, EDWARD J., M.R.C.S., L.S.A., F.C.S., has been appointed Medical Officer for the Benenden District of the Cranbrook Union.

DODD, THOMAS ANTHONY, L.R.C.P.Ed., M.R.C.S., has been appointed Consulting Medical Officer to the Newcastle-on-Tyne Workhouse Hospital.

FAULKNER, HERBERT, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Henstead Union.

FAWCITT, JOHN W., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Broughton West District of the Ulverstone Union.

FORDEN, GEORGE, L.S.A., has been appointed Medical Officer for the Sixth District of the Bridgewater Union.

JONES, ROBERT, L.R.C.P.Ed., M.R.C.S., Honorary Surgeon to the Liverpool Stanley Hospital, has been appointed Consulting Surgeon to the Manchester Ship Canal from Lymm to Liverpool.

MACVIE, ADAM, M.D. Ed., M.B., C.M. Glas. and Edin., has been appointed Medical Officer for the Second District of the Wharfedale Union.

MALDEN, WALTER, M.A. Camb., M.B., M.R.C.S., has been appointed Medical Officer for the Pembury District of the Tonbridge Union.

PEDLEY, GEORGE ASTON, M.R.C.S., L.R.C.P.Lond., L.S.A., has been appointed Deputy Superintendent of Vaccination for Mandalay, Upper Burmah.

REES, JOHN, M.R.C.S., L.S.A., has been appointed Medical Officer for the Second District of the Steyning Union.

ROBERTS, HENRY, L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Fourth District of the Chipping Norton Union.

SCATLIFF, A. WM., L.R.C.P., L.R.C.S., L.M.Ed., L.S.A., has been appointed Medical Officer of Health for the Margate Urban Sanitary District, vice W. K. Treves, F.R.C.S., resigned.

SPICER, R. H. SCANES, M.D.Lond. (not St.And., as stated last week), B.Sc., has been appointed Physician for Diseases of the Throat to St. Mary's Hospital.

THOMPSON, ED. T., L.K.Q.C.P.I., L.R.C.S.I., L.M. Coombe Hosp Dub., has been appointed Medical Officer for the Brailes District of the Shipston-on-Stour Union.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

ANCOATS HOSPITAL, Manchester.—Junior Visiting Surgeon. Salary £60 with board and laundry service.

BIRMINGHAM GENERAL DISPENSARY.—A vacancy on the staff of resident Surgeons. Salary £150 per annum, with an allowance of £30 per annum for cab hire, and furnished rooms, fire, lights, and attendance.

GENERAL HOSPITAL, Birmingham.—Resident Surgical Officer. Salary £130 per annum, with residence, board, and washing. Also Assistant House Surgeon. No salary, but residence, board, and washing.

HERTFORD BRITISH HOSPITAL, Paris.—House Surgeon.

HOSPITAL FOR WOMEN, Soho-square.—Two Clinical Assistants in the out-patient department. Fee for course of three months, £5 5s.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon. No salary, but board and lodging provided.

LONDON SKIN HOSPITAL, Cranbourne-street.—Assistant Medical Officer.

LONDON TEMPERANCE HOSPITAL.—Hampstead-road, N.W.—Registrar and Chloroformist. Salary £50 per annum. Non-resident.

LONDON THROAT HOSPITAL, Great Portland-street.—Vacancy on the Medical Staff.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury.—Junior House Physician. Salary £50 per annum, with board and apartments in the hospital.

NEWPORT COUNTY INFIRMARY.—House Surgeon—out-visiting district attached. Salary £100 a year, with board and residence.

NORTH-WEST LONDON HOSPITAL, Kentish-town-road.—Senior Resident Medical Officer. In the event of the Assistant Medical Officer being promoted to the senior post, candidates should state if they will take the junior appointment.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Rooms, commons, and washing provided in the hospital in lieu of salary.

SHAMBE'S HOSPITAL SOCIETY, Greenwich.—Visiting Physician.

WARWICK COUNTY LUNATIC ASYLUM.—Assistant Medical Officer. Salary £100 a year. Board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

ALEXANDER.—On the 14th inst., at Epsom, Surrey, the wife of Thomas Anderson Alexander, M.D., of a daughter.

BINNS.—On Feb. 5th, 1888 (Quinquagesima Sunday), at his parents' home, The Grange, Leeds, Yorkshire, the wife of William Binns, Surgeon, of The Cedars, East Bergholt, near Colchester, of a daughter.

GEOGHEGAN.—On the 12th inst., at The Common, Woolwich, the wife of A. O. Geoghegan, Surgeon, Medical Staff, of a daughter.

GILES.—On the 11th inst., at Sleaford, the wife of Oswald Giles, of a son.

LUCHY.—On the 14th inst., at The Elms, Bush-hill-park, Enfield, the wife of Wm. Cubitt Lucey, M.D., M.Ch., of a son.

MACQUEEN.—On the 16th inst., at Sussex House, Eastbourne, the wife of Thomas MacQueen, M.B., C.M., of a son.

RIGDEN.—On the 15th inst., at Burgate, Canterbury, the wife of Brian Rigden, M.R.C.S., of a son.

MARRIAGES.

BATTEN—CORNISH.—On the 10th inst., at Penzance, George Beckett Batten, M.D., to Helen Grace, daughter of Thomas Cornish, Esq., of Penzance.

CROFT—STOREY.—On the 18th inst., at St. Matthew's, Lightcliffe, Yorks, Edward Octavius Croft, M.R.C.S., L.R.C.P., of Clarendon-road, Leeds, eighth son of the late Charles Ilderton Croft, F.R.C.S., of the City of London, to Eleanor Annie, second daughter of John Storey, Esq., of Newcastle-on-Tyne.

GRAHAM—DAWSON.—On the 16th inst., at the Presbyterian Church, Emperor's-gate, South Kensington, William Graham, M.D., Medical Superintendent of the Armagh County Asylum, to Stella, eldest daughter of Major R. B. Dawson, J.P., Southsea and Nohaville, co. Westmeath.

HOLMES—WALKER.—On the 17th inst., at St. Mark's Church, Peterborough, by the Very Rev. the Dean of Peterborough, assisted by the Rev. Edward Holmes, father of the bridegroom, and the Rev. J. H. Molesworth, Vicar of the Parish, the Rev. Wm. Perowne Holmes, Vicar of Longthorpe, and Minor Canon of Peterborough Cathedral, to Ethel Margaret, eldest daughter of Thos. James Walker, of Peterborough, M.D. and J.P.

PHILIP—MOTHERWELL.—On the 19th inst., at Bridge of Allan, by the Rev. George Philip, M.A., Free St. John's Church, Edinburgh, father of the bridegroom, Robert William Philip, M.A., M.D., F.R.C.P.E., of Edinburgh, to Bessie, youngest daughter of the late John F. Motherwell, of Cuitibar House, county Sligo, and widow of the late Isaac Cooke Seddon, Solicitor, of Melbourne.

SHARPLES—PHILLIPS.—On the 14th inst., at St. John's, Edinburgh, Charles William, Surgeon, Royal Naval Hospital, Plymouth, younger son of the late Thomas Sharples, of Tamworth, to Margaret Spencer, younger daughter of Joseph Phillips, of Forth Bridge House, South Queensferry, N.B.

DEATHS.

ALEXANDER.—On the 13th inst., at Blackwall Lodge, Halifax, William Alexander, M.D., F.R.C.P.Lond., J.P. for the West Riding of Yorkshire, aged 81.

BINNS.—On the 10th ult., at his parents' home, The Grange, Leeds, Yorkshire, William Binns, Surgeon, of The Cedars, East Bergholt, near Colchester, aged 43.

DAY.—On the 16th inst., at Billinghay, Lincolnshire, Edward Maurice Day, M.D., aged 40.

DWELLY.—On the 8th inst., at his residence, Rye-lane, Henry James Dwelly, L.R.C.P.Ed., M.R.C.S., in his 45th year.

LUCE.—On Friday morning, the 13th inst., at 16, Deane-road, Fairfield, Liverpool, after a very short illness, James Johnstone Luce, M.D., L.R.C.P., M.R.C.S. Deeply regretted.

TOWNLEY.—On the 18th inst., at Kennington-park-road, after a short illness, James Townley, M.D., F.R.C.S., eldest son of the late Robert Townley, of Ramsgate, in his 81st year.

WOODBURN.—On the 13th inst., at Barns-street, Ayr, David Woodburn, M.D., late of the H.E.I.C.S., aged 83.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, April 23.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITALS.—Operations, 2 P.M., and each day in the week at the same hour.
SOCIETY OF ARTS.—8 P.M. Mr. Richard Bannister: Milk Supply, and Butter- and Cheese-making. (Cantor Lecture.)
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. J. Astley Bloxam: The Treatment of Syphilis by the Intra-muscular Injection of Mercury.—Dr. Hanaford (Nottingham): On Albuminuria in Enteric Fever.

Tuesday, April 24.

GUY'S HOSPITAL.—Operations, 1.30 P.M. and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.
ROYAL INSTITUTION.—3 P.M. Mr. Charles Waldstein: John Ruskin.
SOCIETY OF ARTS.—8 P.M. Mr. Lewis Foreman Day: Craftsman and Manufacturer.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Prof. W. H. Corfield: Sanitary Appliances.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Dr. Archibald E. Garrod: A Further Contribution to the Study of Rheumatoid Arthritis.—Dr. Haig: Effects in Diseases connected with Uric Acid of some Drugs which cause Retention of Uric Acid, in contrast with the action of Salicylates, as shown in a previous paper.

Wednesday, April 25.

A[illegible]ONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-ST.—Operations, 9 A.M.; Saturday, same hour.
HUNTERIAN SOCIETY.—8 P.M. Dr. A. T. Davies: A case of Paralysis Agitans.—Dr. Stephen Mackenzie: The Skin Affections connected with Rheumatism.—Dr. Dundas Grant: (1) Cancer of the Larynx benefited by Tracheotomy; (2) A Nasal Trephine.—Dr. Carpenter (for the President): Hereditary Absence of Iris associated Talipes.
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Conversazione.
SOCIETY OF ARTS.—8 P.M. Miss Chreiman: The Physical Culture of Women.
BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Specimens will be exhibited by Dr. Purcell, Dr. Fancourt Barnes, Mr. Lawson Tait, the President, and others. Dr. Wm. Alexander: A New Method of Treating hitherto Incurable Cases of Incontinence of Urine in Women. Council at 8 P.M.

Thursday, April 26.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Prof. Dewar: The Chemical Arts.

Friday, April 27.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
THE PARKES MUSEUM OF HYGIENE.—8 P.M. Mr. H. Percy Boulnois: Scavenging, Disposal of Refuse and Sewage.
CLINICAL SOCIETY OF LONDON.—8.30 P.M. Mr. B. Wainwright: Case illustrating the Advantage of Early Incision with Drainage, as opposed to Excision of Joints.—Dr. Hale White: On Perihepatitis.—Mr. Lucas: Case of Tumour of Right Ovary in a Child aged seven, associated with Precocious Puberty; Ovariotomy; Cure.—Mr. Symonds: Case of Rupture of Urinary Bladder in which the Rent was sutured.
ROYAL INSTITUTION.—9 P.M. Mr. James Wimshurst: Electrical Influence Machines.

Saturday, April 28.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
ROYAL INSTITUTION.—3 P.M. Mr. Carl Armbruster: The Later Works of Richard Wagner. (With Vocal and Instrumental Illustrations.)

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 19th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Apl. 13	29·77	N.W.	54	50	97	63	43	·03	Cloudy
,, 14	29·85	S.W.	52	49	90	62	46	...	Cloudy
,, 15	29·85	S.E.	52	48	106	64	44	...	Cloudy
,, 16	29·93	S.W.	50	45	103	62	44	·15	Bright
,, 17	29·76	S.W.	46	37	93	59	46	·07	Cloudy
,, 18	29·68	S.W.	50	47	103	59	47	·07	Raining
,, 19	29·61	S.W.	49	46	83	53	43	·31	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

BABYLONISH MEDICINE.

W. M. G.—The Babylonians, according to Herodotus, had no medical practitioners. But they carried their sick into the forum or market-place, to give the passer-by an opportunity of seeing the invalid, and of conferring with him as to his malady. If the former happened to have suffered from the same malady as the invalid, or had seen others similarly afflicted, he described what had proved efficacious in the circumstances. No one was allowed to pass by an invalid in silence—without inquiring, that is to say, as to the disease he suffered from. See the whole passage, which is exceedingly interesting, in the "Clio," chapter 197, either in the original (ed. Abicht), or in the excellent translation of Canon Rawlinson.

Mr. R. A. Skinner cannot do more than communicate with the Home Secretary, unless he can get a question put to that gentleman in the House of Commons.

KERATOSCOPY.

To the Editors of THE LANCET.

SIRS,—In the course of my practice I have met with a considerable number of cases the symptoms in which—i.e., constant headache, watering of the eyes, irritability of the lids, running together of the lines of print, &c.—suggested errors of vision (refractive). I purchased a keratoscope (10-in. focus mirror), and learnt to use it. I am now able to say positively that such errors do exist in these cases. Being a general practitioner, I do not possess a trial case, this being a costly luxury, and one not essential to my daily work. Still, I should very much like to have a certain assortment of lenses sufficient for ordinary cases, if I could buy one [illegible]erate price—say, two or three guineas.

I am, Sirs, yours faithfully,

April, 1888. A GENERAL PRACTITIONER.

*** Our correspondent will obtain what he requires by writing to Messrs. Pickard and Curry, 195, Gt. Portland-st., London, W.—ED. L.

"PUNCH" ON "THE PLEASURE HORSE."

THE current number of our contemporary, *Punch*, contains a ballad which, under the title of "Perils of a Pleasure Horse," gives to the Right Hon. J. Goschen a friendly criticism of his project of taxing pleasure horses.

Mr. R. Williamson (San Francisco).—A paper on the subject will shortly appear in our columns.

ROYAL NAVAL AND MILITARY BAZAAR.

WE have received a copy of the illustrated "Handbook of the Naval and Military Bazaar in aid of the Establishment and Maintenance of Soldiers' and Sailors' Homes in various Naval and Military Stations at Home and Abroad," to be held in the Hôtel Métropole in the third week of May. We believe these homes to have done a very great amount of good by providing places of rest and recreation for the soldiers and sailors, free from the temptations to intemperance and debauchery, which unfortunately abound in our seaports and garrisons. We most sincerely wish success to this movement for the extension of the system. We regret, however, that we cannot congratulate the promoters of the bazaar on their sound judgment or good taste. In the list of patrons there are but two names without handles to them—those of Mr. Forwood, Parliamentary Secretary to the Admiralty, and the Rev. Canon Fleming. Surely, among the numerous untitled and undecorated philanthropists who have helped to promote this beneficent work some names might have been found worthy to be associated even with Royalty. But, *Procul, procul este profani*. We also take exception to the manner in which the silver trumpets have been blown in honour of the Wesleyan Methodist Church, although it is added, "aided in many instances by the support, and always, as it believes, by the sympathy, of other churches." We could have wished this denominational element entirely omitted, as we believe it will operate adversely to the interests of the Homes. We have also been struck with the prominence given to certain of the Homes, while others—such, for instance as that at Gibraltar—have been quietly ignored. And we also observe, not without regret, that in no instance is any reference made to assistance or sympathy received from members of our profession. Generals and Admirals, G.C.B.'s and K.C.B.'s, are held up to admiration for the deep interest they take in the movement; but no such notice is taken of any of the naval or military medical officers, although we believe among them are men who have done more practical work in the promotion of these Homes than the much-lauded titled patrons. We point to these defects in the hope that in future a little more judgment and good feeling may be shown by those entrusted with the management. We most sincerely trust that in the present instance, despite these shortcomings, the results of the bazaar may be such as to justify a considerable extension of the Soldiers' and Sailors' Homes.

M.R.C.S.—Probably another urgent appeal to the gentleman would be effectual. Original testimonials should never be sent. Copies, properly accredited, are always sufficient.

THE MARSHALL AND SHAW FUND.

To the Editors of THE LANCET.

SIRS,—Will you be kind enough to insert the following additional list of subscriptions to the above fund.

I am, Sirs, yours truly,

April 17th, 1888. W. H. HARSANT, Hon. Sec.

Amount acknowledged	£159	18	6	Lansdown, F. P.	£2	2	0
Ackland, W. R.	1	1	0	Lawrence, A. E. Aust, M.D.	2	2	0
Andrews, O., M.D. ...	1	1	0	Liddon, W., M.B. ...	2	2	0
Burder, G. F., M.D. ...	2	2	0	Lysaght, John, Esq. ...	21	0	0
Burroughs, B. P. B. ...	1	1	0	Marchant, W. R. F., M.D.	0	10	6
Colman, T. J., M.D. ...	3	3	0	Morgan, John	3	3	0
Coombs, C. P., M.D. ...	1	1	0	Needham, F., M.D. ...	3	3	0
Cory, W. H.	1	1	0	Newstead, J.	5	5	0
Crossman, E., M.D. ...	2	2	0	Parker, G., M.D.	1	1	0
Cunningham, A. G., M.B.	1	1	0	Roué, W. Barrett, M.D.	1	1	0
Ewens, J.	1	1	0	Roxburgh, R., M.B. ...	2	12	6
Fendick, R. G.	1	1	0	Shaw, Miss, per J. S. Bartrum	5	0	0
Fitzgerald, —, M.D. ...	3	3	0	Skelton, H., M.D. ...	1	1	0
Fowler, R. S.	1	1	0	Smith, Samuel	1	1	0
Gibbs, A. N. Godby ...	1	1	0	Stear, H.	1	1	0
Giles and Schacht, Messrs.	2	2	0	Steele, C., M.D.	2	2	0
Goss, T. B.	2	2	0	Swain, J., M.D.	1	1	0
Hinton, J.	5	0	0	Taylor, T. H.	2	2	0
Johnson, George, M.D., F.R.S.	2	2	0	White, J. W.	0	10	0
				Wigan, G. C. H., M.D. ...	1	1	0

AN APPEAL.

AN appeal is now being made to raise a fund sufficient to enable a medical man of good position, who has been reduced to absolute destitution through no fault of his own, to buy a small practice, and thus make a living for himself and his wife. A good opening at a watering-place can be secured at very small cost, and contributions towards the purchase money will be received by Dr. Farquharson, M.P., Migvie Lodge, Porchester-gardens. Amounts already subscribed:—

Sir Joseph Lister, Bt. ...	£20	0	0	Dr. Ramskill	£4	4	0
Sir Andrew Clark, Bt. ...	8	8	0	Sir William Jenner, Bt. ...	2	2	0
Sir James Paget, Bt. ...	6	6	0	Sir Spencer Wells, Bt. ...	1	1	0
Sir Henry Thompson ...	5	0	0	Dr. Broadbent	1	1	0
British Medical Benevolent Fund	5	0	0	Dr. Hare	1	1	0
				Dr. Farquharson, M.P. ...	1	0	0

MEDICAL PHILOSOPHY.

UNDER this title has been published the discourse delivered on Jan. 2nd of this year at the celebration of the founding of Würzburg University (1403) by its Rector, Professor Rindfleisch. It touches mainly on the attitude to be maintained by the modern physician towards the great problem of nature. The author draws a sharp distinction between "mechanism" as the prevailing theory of all natural phenomena, and "materialism" as a dogmatic affirmation of their ultimate basis; and he counsels an "earnest, sincere, and conscientious reticence in presence of the 'uninvestigable'" (*Unerforschliches*), while urging "an unwearied persistence in examining and utilising all that we can measure and weigh." However far we may advance into the penetralia of knowledge, nature will always be found to keep her last secret to herself, the Infinite remaining ever uninvestigable, though actually present in all existent things, and enveloping the investigator himself. Though we should succeed in referring all the multiplicity of nature to some few elementary phenomena—ay, even to one element,—the riddle is merely staved off, not solved. This ruling conviction is borne in on us with peculiar force in speculating as to life. The older vitalism, according to Dr. Rindfleisch, which conceived the life energy as an independent spiritual entity in connexion with matter, is justly abandoned. The arguments that have proved fatal to it do not affect, however, the neo-vitalism which is cognisant of life energy only in the most intimate connexion with the life matter belonging to it, and which makes both coincidently the object of scientific research. Even the cell theory, with its development, has placed before us even more significantly two main facts: First, a certain self-willedness (*Eigenwilligkeit*) of the life substance as against the life conditions surrounding it, and, secondly, that continuity of life which makes life itself appear to us as a single, unbroken, progressive movement, whose origin is veiled in mystery. The more the cell has proved itself a little round entity of soft, albuminoid substance, the more enigmatical have its movements, with its peculiar autonomy, become. Again, the conception of a primordial element which offers a convenient "last resort" for the origin of life is always more untenable in the light of the newer and the newest science. The mighty riddle remains ever intact, and the more we measure and weigh, the more convinced we become of the necessity for a sober reticence (*ernste Zurückhaltung*) in presence of the uninvestigable. The discourse is indeed, an admirable homily, in a profoundly anti-Positivist sense, on our own medical Locke's noble saying: "It is of great use to the sailor to know the length of his line, though he cannot with it fathom all the depths of the ocean."

Mr. M. A. Taylor.—We would advise our correspondent in the future not to attend a police-court on the "warning" given by a police officer, but to insist on being formally summoned.

D. L.—No. We believe there is no precedent for such a course.

"HARD TIMES IN THE PROFESSION."

To the Editors of THE LANCET.

SIRS,—To show that "Quercus" is not alone in his experience, I write to say that there are in my neighbourhood two such traders in advice and medicine. One of them sends his medicine boy distributing handbills from house to house, while on some nights the advertiser himself is to be seen at the door of his "shop" handing them to the passers-by. He informs the public in his "circular" that he is a doctor (L.S.A. being the qualification which entitles him to the degree); that having disposed of his practice, which he carried on elsewhere for twelve years, he will now give the whole of his time to dispensary work. Advice and medicine, 6*d.*; visit and medicine, 1*s.* Another charges 6*d.* a bottle, three for 1*s.* Yet another issued a circular on much the same lines as the first. But having, by dint of disparaging the regular practitioners and by advertising, realised a sufficient income to enable him to hire, and drive about in, a grocer's cart, he has, I believe, given up issuing circulars.

When such methods as these are resorted to by duly qualified men to get a practice together, what wonder is it that the profession is undervalued.

I remain, Sirs, yours faithfully,

March 29th, 1888. SPECTATOR.

THE HERITAGE FUND.

To the Editors of THE LANCET.

SIRS,—In answer to the appeal on behalf of the family of Mr. J. H. Heritage, which you so kindly inserted in THE LANCET, I am happy to be able to say that the donations already received—thanks to the generosity of the donors—will enable one of the children to obtain an immediate presentation to St. Anne's School, in compliance with the offer of a gentleman to give £90, half the amount necessary for that purpose. Any further donations will be applied to the relief of the family, and towards obtaining help for the education of the other six children.

Believe me, dear Sirs, yours truly,

April 18th, 1888. JOHN M. BRIGHT.

AN APPEAL.

To the Editors of THE LANCET.

SIRS,—Through your kindness will you allow us to appeal to the charity of our profession on behalf of the widow of a brother practitioner who has just died at Dean-road, Liverpool? The case is that of James Johnstone Luce, M.D. St. And., M.R.C.S., 1840, &c. He died on April 13th, 1888, after a couple of days' illness from the bursting of a mediastinal abscess into the bronchi, leaving a widow entirely without means except a small annuity of from £12 to £18 a year, and she is without any relatives excepting an aunt aged between seventy and eighty. Owing to ill health and advancing age, Mrs. Luce is unable to earn the means of living. After holding practices at Wincanton, Glastonbury, and finally at Stratford-on-Avon, which latter place he left in 1881 owing to the ill-health of his wife, he became in 1882 resident physician at Seafield House Hydropathic Establishment, Liverpool, and invested in that concern the greater part of his saved money, the whole of which he lost when it became bankrupt in 1883. He then became involved in a lawsuit about a private lunatic asylum, for which he had been in negotiation before he went to Seafield House, and by these two ventures the whole of his principal (several thousands) was lost. The salary even which should have been paid by Seafield House was not paid. Thus reduced to penury at the age of nearly seventy, he became medical man to the *Vancouver* steamship, Dominion Line, which he left to go to the Windermere Hydropathic Establishment, where he remained a year, until they could not afford to retain a resident physician, and returned to the steamship *Vancouver*, which he afterwards resigned to obtain his living as locum tenens, and so died, after taking charge of many high-class practices, for which he was eminently qualified, being a perfect type of an English gentleman. Of him it may truly be said he never lost a friend, but was always making new ones, was kind and charitable to all, and will be much lamented by everyone who knew him.

We shall be happy to receive and acknowledge any donations which may be sent us.—We are, Sirs, yours truly,

W. T. SHEPPARD, M.D.,
64, Durning-road, Liverpool.
R. CATON, M.D.,
Liverpool, April 17th, 1888. 31, Rodney-street, Liverpool.

THE APOTHECARIES' HALL EXAMINATIONS.

To the Editors of THE LANCET.

SIRS,—Referring to the letter of your correspondent, "Opiferque per Orbem dicor," in your issue of April 7th, allow me, as a student, to deny the charge he makes against the Hall examinations. I have been examined at the R.C.S., the R.C.P.London, and the Hall. But at the last-named I was rejected; and I am sure deservedly so, or I should not have been sent down. The examination I had was most fair, and at the same time most searching, the examiners trying to find out what the candidate knows, not what he does not know, and going over a vast amount of work in a very short time. There were ten men up with me, and eight, including myself, were rejected. We naturally thought it very hard; but really at heart we know we deserved our fate through insufficient knowledge. But as to the fairness of the examination and the kindness of the examiners we had but one idea—that in both respects we had never received better treatment at any examination. Only look at the list of examiners—all really practical and good men,—and then imagine their turning a man loose to practise with a half knowledge of his work.

I am, Sirs, yours faithfully,
April 16th, 1888. JUSTICE.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Collie, London; Mr. F. A. Southam, Manchester; Mr. Godrich; Dr. J. B. Squire, London; Mr. H. Morris, London; Mr. C. Wicks, Newcastle-on-Tyne; Mr. F. P. Atkinson; Dr. Spencer, Bristol; Mr. Armitage, London; Dr. Alex. Stirling, Grays; Mr. L. Humphry, Cambridge; Dr. Munro, Jarrow; Mr. R. S. Bishop, Manchester; Messrs. Carr and Co., Carlisle; Mr. Berry, Wigan; Mr. Warren, Liverpool; Mr. Mayo Collier, London; Mr. C. W. Snell, London; Dr. D. B. Lees; Dr. R. Barnes, London; Dr. Arkle, London; Dr. Dobson, Exeter; Mr. F. A. Purcell, London; Dr. Uckermann, Christiania; Mr. F. S. Hager, Lancaster; Dr. G. Whyte, Elgin; Mr. Farwell, Horley; Dr. Griffiths, London; Dr. Coghill, Birmingham; Dr. R. J. Lee, London; Mr. J. Tily, Chiswick; Mr. Smith, Somerset; Messrs. Cazaux, Dey, and Co., London; Miss Disney, Berkhampsted; Messrs. Godfrey and Cooke, London; Mr. Stewart, London; Mr. G. Stanley, Plympton; Mr. Welsh, Guildford; Mr. MacAlister, London; Drs. Sheppard and Caton, Liverpool; Mr. H. B. Hewetson, Leeds; Messrs. C. Griffin and Co., London; Mr. J. Rankine, Sunderland; Dr. Armstrong, South Shields; Dr. Gayton, London; Dr. Leggatt, London; Dr. Ingleby Mackenzie, Edinburgh; Mr. H. H. Sturge, Hitham; Dr. Hingston Fox, London; Mr. Haviland, Douglas; Mr. Harsant; Mr. Blackett, London; Dr. J. B. Allan, Glasgow; Dr. Bright, London; Mr. F. C. Turner, London; Dr. Goodridge, Bath; Dr. W. J. Smith, London; Mr. Stanwell, Rochdale; Mr. Lockwood, London; Mr. J. Vance, London; Dr. Ramskill, London; Mr. Jeffery, Epsom; Mr. Hughes, Manchester; Mr. G. H. Makins; Mr. Mainwaring, London; Mr. Scott, Manchester; Mr. Griffiths, Cricklewood; Mr. Eastwood, Blackburn; Messrs. Fletcher, London; Dr. A. G. Bateman, London; Newport Infirmary; Western; J., Bournemouth; H., London; West Herts Infirmary; B., Birmingham; Tempus; Scalpel; A. D., St. John's Wood; B. B.; Justice; J. G. B.

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